

FOGHORN

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INDEX

FROM THE FOG

- 3 **At the W. C. C. Faire** by Frank Morton
A review of the West Coast Computer Faire and some additional notes.
- 5 **Calendar Changes** by Bobbie Freitas
FOG's office manager has reorganized the CALENDAR to accommodate the Post Office.

TIPS FOR TYROS

- 11 **A WordStar Tip for Using "The Word Plus"**
..... by David Whorf
A short but quick tip to implement a Spelling Checker Program from within WordStar.

ARTICLES

- 11 **A Proposal for Standardization in Cooperative Databases** by Dick Ezzard
Establishing the public domain PCFILE format as the vehicle for exchanging data would benefit all users.
- 13 **Software Standards Please!** by Claude Ostyn
Claude proposes standards for software submitted to the FOG library.
- 16 **The Huffman Code For Text Squeezing** by David Busch
Information about and insights into the theory of file squeezing.

BOOK REVIEWS

- 18 **Review of CP/M Programmers Encyclopedia**
..... by Gary Shaner
A book that consolidates commands and proper syntax for CP/M 2.2 and 3.0, and the popular programming languages into one source.
- 18 **The Free Software Catalog** by Jim Remich
A book with short descriptions of possibly 4000 free programs.
- 18 **The Sensuous WordStar — A Review of Under-Ground WordStar** by Dick Ezzard
An experienced WordStar user finds in this book the reawakening of the learning experience.

HARDWARE REVIEWS

- 22 **A Printer Buffer That Won't Break the Bank**
..... by T. J. Kring
A review of a printer buffer with a reasonable price.
- 22 **Epson PX-8 Geneva** by Conrad Stenton
A description of the Epson Geneva, some features, programs that run with it and a number of things designed to drive the Osborne user crazy.
- 23 **Centroid Big Stepper Motion Controller**
..... by Gary Shaner
If you have an interest in small quantity automation, be sure to read this.

- 24 **Drive C:** by Charles Bailey
Charles tells us what purposes Drive C: is recommended for, and the benefits and disadvantages of using it.
- 25 **TAXAN Monitor** by Jim Dunn
Descriptions of the TAXAN monitor and a problem.
- 28 **Report of Two 2400 Baud Modems; Penril 2024 and USR Courier 2400** by Sigi Kluger
A comparison of two new modems.

SOFTWARE REVIEWS

- 31 **Review of Fancy Font, Version 2.1** by Ron Brown
Ron reviews the newly released version and talks about the variety of fonts, how to use Fancy Font, and a couple of programs that come with it.
- 32 **Academic Writing With WordStar With a Little Help From Footnote, Bibliography, and Notebook**
..... by Jim Spickard
A review of three programs that make academic writing easier.
- 36 **Notes on the Use of 2500AD Z80 Assembler**
..... by Bob Bradley
Bob shares some notes on the 2500AD Z80 assembler to save others from some of the problems he experienced.
- 36 **X.COM and /.COM Documentation** . by Charles Bailey
A review of what these two programs can do, that are found in the FOG library.
- 37 **ManyKey** by Charles Bailey
Charles writes about the benefits of using ManyKey, features, and applications with examples of tasks that can be assigned to the keys.
- 38 **SmartKey** by Charles Bailey
The cost of this package has been dropping lately so be sure to check before ordering.
- 38 **Spreading the New Word**
..... by Herb Golden, copyright © 1985
Even those who received WordStar as part of their bundled software should take a few minutes to read this review.

SYSTEM NOTES

- 45 **A Fix for Digital Research's MAC-80 Macro-Assembler** by Byron A. McKay
Changing the character MAC-80 uses to indicate commands solves an irritating problem.
- 45 **MATH* a.k.a. MATHSTAR Upgrade for WordStar 3.30**
..... by Jason M. Bloomberg
Jason tells us where you can have MATH* upgraded to work with WS Ver 3.30 and a few words about SynonymFinder.
- 46 **Stripping Variables in MBASIC Revisited**
..... by Author Unknown
Using GOSUB in a defined function.

cont. on page 79

FOG has been formed as a users' group for all persons who use or are interested in portable computers. Membership is available to any interested party whether or not they currently own a computer. The **FOGHORN** is published monthly by the First Osborne Group for its members. A subscription providing bulk mail delivery to an address in the U.S. is included with membership in FOG for \$24.00 per year. See chart below for the additional postage required for other locations. Address all inquiries to FOG, P. O. Box 3474, Daly City, CA, 94015-0474. The Voice Phone is (415) 755-4140.

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FOG Membership Information Updates

Changes Noted In Prior Issues

The items in the list below have been changed since the FOG Membership Information brochures were mailed to most members. The month in the right hand column is the issue month in which the changes were published.

Submissions to the **FOGHORN** April, 1985
Submissions to the FOG Disk Library April, 1985
.....

Ordering Disks from the FOG Library

Due to the increase in the number of disks members are ordering, especially since the release of the Starter Disks, we have been able to lower the cost of disks. There is no longer a shipping and handling charge for any orders, regardless of size. Additionally, the cost per disk, effective June 1st, will be \$4.00 per disk for orders of less than ten disks and \$3.00 per disk for orders of ten or more.
.....

First Class Postage Rates

The following is a list of additional charges which must be included with new or renewing memberships effective 3/1/85:

Canada & Mexico (First Class) ADD. \$ 9.00
Members with U.S. addresses who prefer First Class delivery to Non-profit bulk mail ADD. \$ 9.00
Central & South America, Caribbean, & Europe (Airmail First Class delivery) ADD. \$12.00
Asia, Africa, & Far East (Airmail First Class) ADD. \$15.00
Out of North America preferring surface mail — delivery not guaranteed ADD. \$ 6.00
.....

Please help

It is essential that you include your account-membership number in all correspondence. *Omitting your membership number will needlessly delay shipment of your order.* It is not necessary to write a separate check for each different order. Consolidating your requests and sending only one check will save the staff considerable time.
.....

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At the W. C. C. Faire by Frank Morton

Billed as "A perfect 10 in Computer Shows" the West Coast computer Faire was held at Moscone Center, in San Francisco, for the first time. It was different in ways other than location. Some commented that it was like a well organized Flea Market. It certainly had a lot more retailers actually vending products than ever before. Also some major manufacturers seemed to be absent. The most notably missed was CompuPro — Now using VIASYN as a Corporate name.

The Faire was smaller. This was partially dictated by the fact that it was totally contained in the Moscone Center. Apple, IBM and AT&T had large booths. Of course Osborne was there. They showed the Exec, the Os4 Vixen, and the Os3 which sells overseas as the Encore. There was a lot of traffic, with a good deal of interest in the Osborne Computer Corporation stock offering (available to Californians and Foreigners only). We had an Osborne related FOG booth in one corner of the Osborne area, plus a separate FOG booth featuring Kaypro, Televideo, Vixen, and other machines.

Kaypro had a large booth that looked great. The most impressive new machine (to me) at the show was the Kaypro 286i (I didn't know that computers came with fuel injection!) At a suggested retail of \$4550, it is IBM PC AT compatible with some very good bundled software, 512K of RAM, and two double-sided high-density 5 1/4" floppies with 1.2 Mb storage each. Boy I wish I could afford one of those. They look potent! An RGB monitor is available for \$595.

Some other "old friends" there with their usual good products included AMPRO, Borland International, Software Toolworks, and the Users Guide. Blackship Trading and Mission Peak shared a booth where they were selling generic disks at some fantastic prices. They also offered a special on Televideo Portables at \$795, which had to be the buy of the show for FOG members. It has CPM+ with 128K RAM, 640 x 240 graphics, and a 9" built in screen. Many FOG members succumbed, and I was very tempted, but my bank account said NO (I had just invested in some camera equipment for my Wedding Photography business.) Someone was selling Workslates at an incredible bargain. Many FOG members went home with those also. It was easy to go broke buying bargains!

I was very happy to see a PC MicroMate booth there! As you have seen on page 5 of our last issue, the implication in my

March editorial was in error [that MicroMate and Zorba were no longer with us]. I often finish up these editorials at hours when research is not readily available. I am as human (read that error prone) as anyone, and in this case was quite pleased to find out that my concern was ill founded. I extended my personal apology to Ron Troxell, the President. It turns out that a friend of mine who intends to join FOG has a Zorba. He tells me that Zorba is being made and sold in Florida. That is good news as well. Both are good machines which are very compatible with the FOG Public Domain software.

DG/Systems is now operating under the new name of SPECTRE. See their double page (pp. 32 & 33) ad in the last *FOGHORN*. They are best known for their Rembrandt Graphics Toolkit and Media Master, which for a low price allows us to transfer data to other disk formats. I talked to Dave Grenewetzki, who gave me a hot tip that they will soon release PRONTO. I am very excited about this product as it is going to offer the features of Sidekick for us CP/M users. I have long been hoping someone would do that. It is the one MS-DOS program that I think is really useful. Dave is doing quite well providing for the "niche market" of forgotten CP/M users. I am glad at least he hasn't forgotten those of us who helped make Ashton-Tate and Sorcim what they are today.

Our annual meeting was held the evening of Mar. 30th at the Sheraton Palace Hotel. The room was nice, but there was a BIG party next door with very loud musical entertainment! The business portion of the meeting went smoothly and quickly. The guest speaker of the evening was Dr. Bill Godbout of CompuPro fame. Lest you forget, it was he who donated the 4 station multi-user CompuPro 10 System with a 40 Mb Hard Disk for our office. There were not many persons at the meeting (I would guess 30 to 40), but we certainly enjoyed his comments! It was a shame that the music was so loud; it was quite difficult to hear him in the back of the room.

Bill explained why the name change to VIASYN. He says there is now over 130 internationally registered corporations with Compu-Whatsits for a name. A CompuPro dealer lost a sizeable municipal bid in an eastern state due to confusion of their name with a California Compu-Whatsits which was in Chapter 11. So they changed their corporate name to a name which sounds more medical related than computer related. This will make it easier to prevent confusion and to identify computer related sound-alikes. The CompuPro trademark will continue to be used.

He expressed his personal opinion (from the outside looking in) that IBM essentially "pulled an Osborne" last fall. IBM tried to create a preemptive strike over AT&T by committing the IBM PC AT before it was ready. They were reacting to AT&T just as Osborne did to IBM earlier with their announcement of the IBM compatible Exec. IBM has since redesigned the main board of the AT, their profits and sales are down (due to customers deciding not to wait for the AT?), and they recently replaced their sales manager. IBM appears to have been producing more PCs than they could sell. It seems just like Osborne all over again.

Bill said the 64K Z80 based computer design is still the largest selling type of personal computer in the world, includ-



ing those in Japan and China. Although the architecture design incorporating an 8080 or Z80 with 64K of RAM is about 10 years old, it is being produced in larger quantities than any other design (including 6502 and family). He said he will publicly have to eat his words to George Morrow. He once told George "How useful can an 8 bit machine be?" Now he says "The truth is we haven't found out yet because we haven't found all the uses for them yet and we are still learning." The Morrow MicroDecision is faster in WordStar applications, than the IBM. Although an 8088 properly configured will run circles around a Z80, IBM's design is not that implementation.

At this point he opened the talk for questions and answers, many of which became technical discussions regarding the relative merits of various 16 bit CPUs. I will not try to do justice to all of the technical subtleties regarding them here.

Q. How can one run very large spreadsheet programs beyond SuperCalc 2 capabilities without resorting to MS-DOS?

A. SuperCalc 2 for 16 bits (CP/M86) will give monster spreadsheets if desired. Most manufacturers, including CompuPro, put a hobble in it because it will ask for all available RAM and gobble it up. CompuPro puts a 256K boundary on SuperCalc 2. Technical Support can tell you how to turn it off and allow up to 1 Mb or more for spreadsheets by telling you where to modify the restraints. Most CompuPro employees who tried Lotus on the CompuPro-to-PC conversion, which is now available, wanted to return to SuperCalc after using Lotus. As an aside they found that the PC video board conversion runs about 23 times faster than native PC. It took a little while to realize they didn't have an error.

Q. What do you think of the Motorola 68000?

A. I just got bitten by the fact that the 68010 is not completely compatible with the 68000. The processor status register on the 68010 has a trap for multi-user protection, which needs to be there. It's just not completely software compatible with the 68000.

Q. But what do you think of the 68000 in general?

A. It is good as a controller chip. Many are used in Chrysler engines. The 68000 is really not a nice piece of architecture for a general purpose computer. The 286 is a lot better. The 68000 is not pipelined and does not have a companion number cruncher chip. Many CompuPro users do a lot of number crunching on FORTRAN. The 68000 is a good dedicated controller and a good file server. It is almost a PDP11, but not almost enough.

Q. Does the 68000 software difficulties imply problems in creating software for the Macintosh?

A. Yes, in general. It does have some nice features, I just can't think of any right now.

Q. What about the (8 bit) 64180?

A. It's a good chip with CMOS and running the Z80 instruction set. Zilog's inability to get their chips up and running may have cost them with the advent of the 64180, etc. The biggest investment any one of us has in computing is not in the hardware. It is in the time and effort we put into creating, or buying

and learning to use software. The Z80 is a good slick 8 bit CPU and capable of writing good code. It would be overkill to use a 32016 for only word processing, for example.

Q. What happened to Godbout Electronics?

A. It is alive and well, but doing only wholesale business. The politics of direct sales did not mix with selling components to computer dealers supplied by Godbout. It turns out there has been virtually no turnover of personnel from the original Godbout crew of about 10 years ago.

Q. Why is MS-DOS better than CP/M, or is it?

A. It came supplied with IBM and they have sold hundreds of thousands of the PCs. MS-DOS is really a giant leap backward; that is why IBM is backing away from it. Machines like the AT will not be primarily MS-DOS. CP/M is technically a superior product, but that does not necessarily mean it will ultimately win out over MS-DOS.

Q. What is happening in 8 bit software?

A. There is darn little development in 8 bit software. What's happening is wherever the money is. The big bubble in the market place WAS the 16 bit PC-DOS/MS-DOS. There is a big shift now going on. Many software vendors are falling now because they married themselves to the IBM PC and sales on that have fallen. The big impetus now will be on multi-user software. There are a few exceptions like NEWWORD available in 8 bit. It may be that software houses, large and small, who are really feeling the sting of slow down on the IBM PC market place and its competition will turn back to the 8 bit (CP/M) market because it does have a very large installed base (1.4 million in use?). They may transport a number of things they did for MS-DOS back to 8 bit CP/M because there is a big demand there.

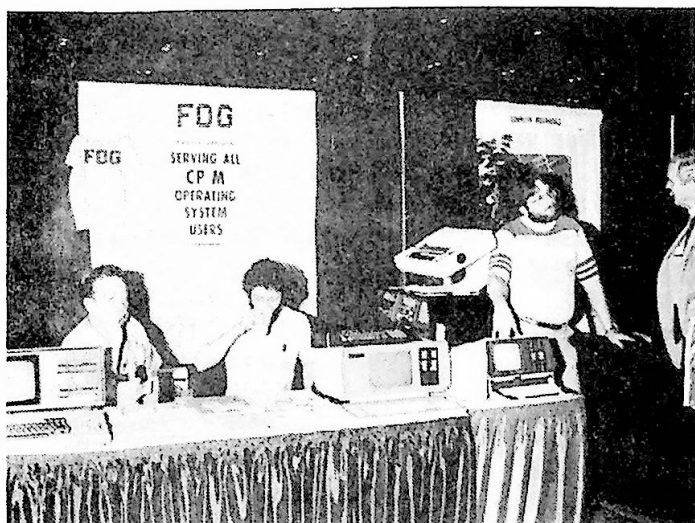
Q. Is there a herd instinct in buying? Do people follow the MIS crowd?

A. I worked for IBM back in the 50's (but not in sales.) There has been essentially no change in business buyers. Back then a lot of people bought IBM mainframes and upgraded them to the latest IBM to keep up with competition. There is a lot of emotion involved in business buying. IBM is a safe business buy. If it works, you are a hero because it works. If it doesn't work, you can't be faulted because after all it's IBM and if IBM doesn't work out, what machine possibly could? Therefore you are blameless. Interestingly, VIASYN beat out IBM AT in two recent big sales with the S100 CompuPro 286 (because it was S100).

Also on the subject of buying, Bill finished with a tale. When Adam was starting up Osborne he offered Bill a chance to invest in a sizeable portion of the company. Bill said "Thanks, but no thanks." When they moved CompuPro to Hayward, he saw that big blue building and heard about a big sale of stock by one of the Osborne investors, he thought "I could have owned 10% of this; I really messed up!" Then about a year ago he was walking across the parking lot saying "Whew — boy was I lucky I didn't get involved in that!" So what you are wishing for today may not be what you need tomorrow!

Bill and his wife put off their supper so that he could come talk to us. We greatly appreciate his comments, advice and continued support!

You saw the results of the election in the last issue of the **FOGHORN**. We all thank you for participating. Our response of approximately 29% of the eligible membership was truly outstanding for a mail in vote! You did vote, didn't you? If not, why not? Thanks also to all who helped to make the Faire and the annual meeting such a success!



Lloyd Rhoades and Jack Brown take a pause while Byron McKay answers a question at the FOG booth. Photograph by Frank Morton.



Troy Soult, Bobbie Freitas and Kennie Smith answering questions at the FOG Corner in OCC Booth. Photograph by Frank Morton.



Personal Micro Computers displaying the MicroMate. Photograph by Frank Morton.

Calendar Changes

by Bobbie Freitas

In the March, 1985 **FOGHORN**, we made a change in the face of the calendar and asked for further suggestions as to how we could improve the **FOGHORN** or any of the services which FOG supplies. Since that time, a number of members have stated, that by the time they receive their current **FOGHORN**, half of the information in the calendar is out of date. For this reason, we have again made another change.

Since most of our members receive their **FOGHORN** during the second week of the month, the listing for those groups which hold their meetings during the first or second week will now show the month and date of the next month. In other words, we will list some groups for the current month, and some for the month to follow.

These, and other changes, are intended to make your FOG membership more productive and informative. To find a meeting in your area, look first under the state (or country) and then under your area code. For members in areas where there is more than one area code, be sure to check both since the meeting in the neighboring area code may in fact be closer. You should also remember that many members attend meetings of more than one group, thus broadening their exposure to new techniques and solutions.

If you have any suggestions for ways in which the **FOGHORN** and FOG office staff may improve the channels of information, please take a few minutes to drop us a note.

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LETTERS

Dear **FOGHORN**

I would like help with the following 2 problems on an Osborne 1:

I have tried unsuccessfully to get our Xerox 610c Memorywriter (which was upgraded to a printer) to print bold [from SuperCalc]. Diablo told me to use /Output, Display, All, Setup, S <ESC>, 2779 ↵. This prints only the first line in bold. How can I get the entire file printed in bold?

My second problem is printing Supercalc in bold on the Xerox 610c Memorywriter and a Diablo 620 printer. On the Diablo 620, we have had to output the Supercalc file to disk, call it up on WordStar and print it in bold from WordStar. Is there an easier and quicker way?

Answers to the above questions can be directed to **FOGHORN**, or sent to me, Karen Inglis, c/o Liston & Thompson, Inc., 890 Saratoga Avenue, San Jose, CA 95129.

Thomas L. Liston
San Jose, CA

When Drive A Will Not Perform a Cold Boot on Your O-1

In the March 1985 issue, you had a letter from Ernest Thiersch telling of his difficulty with drive A on his O-1 not wanting to work on a cold boot. My O-1 has given me a similar problem, but I discovered a better temporary fix than banging on the machine.

After three trips to the repair shop where it worked perfectly every time and then would not boot when I got it home, the repairman told me how to boot up on drive B. When you try to boot up on A, if you get that cursed BOOT ERROR message, hit the RESET button, move the disk in A drive over to B, then press the shift key and the quotation mark key together INSTEAD OF the return key, your computer should boot easily. One oddity that you will discover is that the computer now identifies drive B as A (and A as B), but other than the exchange of disk drives, the computer should work normally.

When RESET is hit again or the computer switched off and back on, drive identification is back to normal.

This procedure may seem a bit worrisome, but when the repairman does not know how to fix your computer, at least you are not "out of business".

Wirt Ragsdale
Bedford, OH

P.S. This does not work on my Executive

Of Floppies and Flippies

I took the plunge and converted my floppies to flippies using only a round-hole paper puncher and an old disk as a template. The results were excellent. I had no problems formatting and using both sides of every disk. I stick to the name brands for reliability: Dysan, 3M, BASF, and Verbatim. Scotch seems to run smoothest. And to hedge my bet, I'm using the flippies mainly as back-up disks. Still, this represents a considerable amount of money saved.

I thought other Osborne users might like to know.

Herb Golden
Silver Spring, MD

Dear Editor

We were pleased to see Mr. Dickey's review of CompuMagic's CMAUTO+ program package appear in the November **FOGHORN** (page 44). It was good to know that Mr. Dickey had no trouble using the programs that make up the CMAUTO+ package. We would like to assure the members of FOG that CompuMagic has always supported its products and will continue to do so. To this end, we would like to give your members the current correct address and phone number for CompuMagic. (Actually the address is still correct, but for more efficient processing of orders, etc., the new address is preferable.) The address is: 24 Crain Highway, Glen Burnie, MD 21061 and the phone number is (301) 766-0464. And we can now accept MC and VISA. Our products (and support for them) are also available from the SUDDEN! Products Group in Washington, DC.

As producers of software that is designed for ease of use by even the most inexperienced of users, we were surprised when we read the review of Autoseup that appeared in the November issue. There are many programs that allow key-redefinition and arrow key switching without the need to learn DDT or worry about what a BIOS change is. There are even some, like CompuMagic's ManyKey, reviewed in **FOGHORN**, Volume 3, Issue #2, that don't require that you "run" anything when changing from one program and its required function and arrow keys to another.

Just a note: Function key redefinition is almost essential when using either a hard disk or a ram-disk. The reviewer of the new Drive C: software package in **FOGHORN**, Volume 3, #11, did not mention it, but Drive C: has been supplying ManyKey with all 384K Drive C: units and hard disk systems purchased since April '84. (Thank you for the index in the November issue!)

The service provided by **FOGHORN** makes the \$24 FOG membership fee an absolute bargain for the Osborne owner that has no intention of replacing his workhorse of a machine. Thanks to you and all the rest of the FOG crew.

Marcia R. Dresner
Norm Dresner
CompuMagic, Inc.

EDFILE & SUPERZAP

The December 1984 issue contained 3 helpful articles for changes using DU and DDT. These changes are much more easily done using EDFILE (FOG/UTL.042) and/or SUPERZAP (which has been sent to the appropriate librarian). The articles that I refer to are: *More Hints and Helps* by Neil Halava on page 10, *Remove Those Resident Commands* by Jack D. Motley on page 38 and *Not a dBASE II Database* by Tom Brobst on page 59.

SUPERZAP is a public domain program by W. M. Davidson that permits you to access the system and directory tracks as well as any file on the disk while EDFILE will not permit access to the system and directory tracks. I prefer these programs over DU and DDT since changes are typed directly into the block display and you do not feel as if you are working in the dark. The display that you work with is very similar to the display that is obtained with the "D" option of DDT and the MAP option of DU. Changes are made in the lefthand portion in HEX and the righthand section in ASCII. In the section that you want to make changes, use "C" to enter the edit mode. On entry into the edit mode the cursor will be in the left or HEX section and a ^I (control I) is used to toggle between the HEX and ASCII sections. Having the complete section displayed to work with is very helpful especially when you are working with a different version of a program and there could be a slight difference in the locations of the changes to be made.

First I will use SUPERZAP or SPZ.COM to remove the resident commands from CP/M as suggested by Jack Motley in his article. This may be done on any disk where the system tracks have been added, so don't use your main system disk until you are sure you want the changes. JDM suggests removing both the DIR and ERA commands, I have removed only the DIR command from my system and changed the ERA to DEL to match the command on most other computers. I have the 80 col. upgrade so I use XDIR3 which I have renamed D.COM and SD.COM for the 780K upgrade that has been renamed DIR.COM in order to read all user areas.

Boot a disk in drive A, that has your system tracks and SPZ.COM as well as the directory that you might be using. At the CP/M A> prompt type:

A> SPZ <---- (YOU TYPE)

(The help messages and a disk directory will be shown.)

P <---- (hit P for SELECT PHYSICAL SECTOR)

(This will bring up TRACK 0000 SECTOR 0000 of the CP/M system tracks)

S <---- (hit S for Select Sector)

6 <---- (for sector 6)

Then you will get this display:

Current-Track	Current-Sector	Current-Block
0000	0006	0000
0000 - 00237EFE 3FC20903 040DC201 0378B7C9		.#??B...B..x7I<
0010 - 44495220 45524120 54595045 53415645		DIR ERA TYPESAVE<
0020 - 52454E20 55534552 00000000 00002110		REN USER.....I.<
0030 - 030E0079 FE06D011 CE070604 1ABEC24F		...y.P.N....>B0<

(Lines 40 thru 90 have been deleted since we will not be working on them and the spaces between columns were removed to stay within the 65 col. spacing.)

Now hit C to enter the edit mode and the cursor will be under the "00" on the first line. The down arrow will put the cursor under the "44" or "D" on the second line. If you plan to delete one or both of the commands stay in the left or HEX section since you want to enter a "NOP" or "00" at these locations.

Current-Track	Current-Sector	Current-Block
0000	0006	0000
0000 - 00237EFE 3FC20903 040DC201 0378B7C9		.#??B...B..x7I<
0010 - 00000020 00000020 54595045 53415645		... TYPESAVE<
0020 - 52454E20 55534552 00000000 00002110		REN USER.....I.<
0030 - 030E0079 FE06D011 CE070604 1ABEC24F		...y.P.N....>B0<

If you are deleting both resident commands, the display should now appear as above. Should you just want to delete the DIR and change the "ERA" to "DEL", use a ^I to move the right or ASCII side and type in "DEL" over the "ERA". When this is complete use a ^Z to save the changes. Now hit RESET and then reboot to bring up your new system. If you like the changes, SYSGEN it to your system disk or start a new system disk.

Now to use EDFILE to customize NSWEEP as suggested by Neil Halava. Place NSWEEP and EDFILE on a disk and boot in drive A. At the A> prompt type: EDFILE NSWEEP.COM ↵ (return) and you will get:

File: NSW207.COM Record: 00000 (0000H) LOF: 00092 (005CH)
00010203 04050607 08090A0B 0C0D0E0F 0123456789ABCDEF

0100 - C36B0118 00000000 00000000 00000000 >Ck.....<
0110 - 00004E53 57502069 7320636F 70797269 >..NSWP is copyr1<
?

(There will be six additional lines here that were deleted as not needed. We will get to line 0100 later.)

At the "?" prompt hit A for ADDRESS to goto. Then type in 1F90H as the address. It could be different if you are using a different version of NSWEEP. If you do not get the display below use the ↵ to move forward or the - (minus) to move backward in the file.

? ADDRESS = 1F90H

File: NSW207.COM Record: 00061 (003DH) LOF: 00092 (005CH)
00010203 04050607 08090A0B 0C0D0E0F 0123456789ABCDEF

1F80 - C1E12305 C27A1FC9 29292929 11873D19 >Aa#.Bz.I)))).<
1F90 - C9202020 0D0A4E53 57454550 20202020 >I .NSWEEP -<
1FA0 - 20205665 7273696F 6E20322E 30372020 > Version 2.07 <
1FB0 - 20202030 372F3137 2F313938 3400A20 > 07/17/1984. <
1FC0 - 20202020 20202028 63292044 61766520 > (C) Dave <
1FD0 - 52616E64 2C203139 38332C20 31393834 >Rand, 1983, 1984<
1FE0 - 000A2020 20202020 20202020 20204564 >... Ed<
1FF0 - 6D6F6E74 6F6E2C20 416C6265 7274610D >monton, Alberta.<
?

```
File: NSWP207.COM Record: 00062 (003EH) LOF: 00092 (005CH)
      00010203 04050607 08090A0B 0C0D0E0F 0123456789ABCDEF
-----
J#00 - 0A0D0A24 0D0A4120 2D205265 74616720 >...$.A - Retag (
J#10 - 66696C65 73202020 20202020 20207C20 >files | (
```

What will be done is to change this:

```
NSWEEP - Version 2.07 07/17/1984
```

(c) Dave Rand, 1983, 1984

Edmonton, Alberta

```
Give A0:??????????? 176K in 19 files. 598K free.
```

```
1. A0: D .COM 4K :
```

or this or your own name and address.

NSWEEP - VERSION 2.07

JERRY BOYCE

5015 SUNNINGDALE COURT

CHARLOTTE, NC 28226

```
Give A0:??????????? 178K in 20 files. 596K free.
```

```
1. A0: D .COM 4K :
```

(Note: this is centered for the 80 col. screen.)

Checking the EDFILE prinouts above, you will find that between 1F91H and 1FFE4H there are 115 spaces that you have to use for whatever you want to place on the screen. For each line, 2 spaces are needed for a <CR> <LF> (0D,0A), a TAB (09) will take one space and move the start of the line over 8 spaces, and a SPACE (20) will of course use one space. If you do not have the 80 column screen, then the center would be 14 columns less so you would space accordingly.

When you have found the proper sector that appears as above, an "E" for EDIT will put you in the edit mode. Use the arrow keys to move around the display and a ^E toggles between the HEX and ASCII sides. The CR, LF, and 09 for TAB have to be entered into the left or HEX side of the display. A space may be entered on either side by use of 20 HEX on the left or hitting the space bar on the right. The text that you enter should be entered as text on the right or you will have to look up the HEX number for each letter to enter on the left. The ^E toggle sends the cursor to the exact location on the other side or entry so you do not have to adjust for the entry.

Now if you have done everything correctly and your entry required the same number of letters as mine and you have the 80 col. screen, the display will appear as below except that some of the column spaces have been deleted to shrink the display.

```
File: NSWP7.COM Record: 00061 (003DH) LOF: 00092 (005CH)
      00010203 04050607 08090A0B 0C0D0E0F 0123456789ABCDEF
-----
```

```
IF80 - C1E12305 C27A1FC9 29292929 11873D19 >Aa#.Bz.I))))..(
```

```
IF90 - C90D0A09 09092020 2020204E 53574545 >I..... NSWEE
```

```
IFA0 - 50202D20 56455253 494F4E20 322E3037 >P - VERSION 2.07(
```

```
IFB0 - 0D0A0909 09092020 4A455252 5920424F >..... JERRY BO
```

```
IFC0 - 5943450D 0A090909 20202020 35303135 >YCE..... 5015(
```

```
IFD0 - 2053554E 4E494E47 44414C45 20434F55 >SUNNINGDALE COU
```

```
IFE0 - 52540D0A 09090920 20202020 20434841 >RT..... CHA
```

```
IFF0 - 524C4F54 544552C0 4E432032 38323236 >RL0TTE, NC 28226(
```

```
File: NSWP7.COM Record: 00062 (003EH) LOF: 00092 (005CH)
      00010203 04050607 08090A0B 0C0D0E0F 0123456789ABCDEF
-----
```

```
2000 - 0D0A0A24 0D0A4120 2D205265 74616720 >...$.A - Retag (
```

```
2010 - 66696C65 73202020 20202020 20207C20 >files | (
```

If you feel that you have it correct, use a ^W to save and a "Q" to exit. Type NSWEEP at the A> prompt and you will see the results of your work. If not as you wanted, re-enter and make the changes needed.

I did not make the change at position 2003H to bring up the HELP SCREEN upon loading the program and the entry of 1A at 2007 to eliminate the second help screen. The 1A entry also would eliminate the heading that you have just spent so much time entering.

The underline on and off at 104H and 10BH did not work with my version of NSWEEP which is ver. 2.07. Also the locations are 2 places advanced from the locations in the ver. 2.2 that Neil used for his article. I tried the entry, both with the 02 he uses and without the 02 ahead of the HEX, for underline on and off. I do not believe that the 02 is needed to introduce the underline on and off values for direct entry except in WordStar print controls at least I have never found it to be needed elsewhere. I have used the underline on and off many times in programs since this is also the command for reverse video if you have made the changes suggested in Thom Hogan's article in the June/July 1984 issue of the *Portable Companion*.

Tom Brobst on page 59 of the December *FOGHORN* suggests the use of DDT for corrections to a database DBF file. I find that EDFILE is much easier to use and the editing can be done directly as the error is seen on the screen. I have saved several DBF files after the dreaded "EOF found unexpectedly" or "Out of Range" when Record 100 is asked for and you know there are at least 500 records in the file. The "EOF" is easily taken out using EDFILE.

Jerry Boyce
LOGIC
Charlotte, NC

PIP Peculiarity

I frequently use the delete [Dn] option of PIP to delete beyond a certain column (n) in a file. The option is useful for cutting off unwanted right-hand columns of tabular data.

Recently, I used the [D] option together with the [E] option (to echo the truncated output to the screen). Surprise! The output was exactly half as wide as I expected. Apparently, the new file, and once when echoed to the screen. I checked with another CP/M user, and his PIP worked the same way.

There are two solutions. Either double the number of columns specified with the [EDn] options, or don't use them together.

Roger P. Boggess
Winston — Salem, NC

Thanks and An Apology

We are writing for two purposes. First, all of us at Spite Software want to thank all the fine folks who have ordered products from us or the other participants in our new "Guide to Products and Services for the Osborne Computers". We intend to be around for a long time, supporting the Osborne Computer (and most other CP/M-80 computers).

Second, we want to apologize. Our order turnaround time has become unacceptably slow in many cases. We really try to get orders out quickly, but by some miserable coincidence we had an unprecedented number of snafus right in the middle of our peak order period. Our 800 line service sent a stack of our orders to some company in New York. They finally forwarded them on to us -- a month later! Normally reliable suppliers got flaky. Our new 1200 baud modem got hung up in FCC approval. Our order entry/invoice system bumped up against the limits of dBASE II, and after I rewrote it the bugs started crawling out of the woodwork. Bah.

Enough sniveling. We're sorry, and we're working hard to ensure it never happens again. We are implementing systems to speed turnaround -- Additional people, more sophisticated order entry software, much screaming at the 800 line folks and higher stocking levels.

To those good folks inconvenienced by our growing pains, we hope the result of our efforts to continue support for CP/M-

80 machines will provide some compensation. We have been able to prove there is still a market for CP/M-80 products, and that has inspired some talented folks to develop some great stuff. In our next product and service guide there will be some things that will knock your eyes out.

Regards,

Bill Babcock
Norm Worthington
Worthington-Babcock, Incorporated
Spite Software

• • • • •

Dear *FOGHORN*,

Witt Services in Bolingbrook, Illinois replaced the faulty keyboard referred to in my letter appearing in your February, 1985 issue. The replacement was made long before the letter appeared. As a matter of fact, my postage costs for returning the keyboard were also refunded. Witt Services made two follow-up telephone calls to inquire about my satisfaction with the product and service. I am now completely pleased with both.

Thank you for publishing my letter.

Baltimore, MD

Ted Schiller

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TIPS FOR TYROS

A WordStar Tip for Using "The Word Plus"

by David Whorf

This is a short but quick tip on how to implement a Spelling Program from within WordStar. MicroPro has designated an "S" option in the non-edit menu in order to call their SpellStar program. If you wish to use another program in its place such as "The Word Plus" simply change the name of its main command file "TW.COM" to "SPELSTAR.OVR" and you will be able to use the program by selecting the "S" option at the non-edit menu within WordStar. It will also return you to WordStar at the completion of the program. I can't remember where I picked up this tip, but it is one of those nice ones you learn to live with and appreciate more and more as you use it.

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John Gaudle is an electrical engineer holding two U.S. Patents on computer systems. He's been a consultant to Osborne Computer Corporation and continues to write for their magazine, the Portable Companion, Foghorn, Dog Bytes, and his own newsletter, the Survivor's Guide. Since 1981 he's been helping people get more from their Osborne Computers.

J. Gaudle Company, Box 27826, Denver, CO 80227

ARTICLES

A Proposal for Standardization in Cooperative Databases

by Dick Ezzard

Benefits of Standardization

Let's you and me agree on some rules just to get the ball rolling . . . Let's always use the PCFILE format to exchange list-type information. What say?

When men deal with each other in any kind of exchange, the mutual establishment of standards facilitates ongoing transactions. Standardizing can be artificial, arbitrary and still be valuable. Everyone knows how the interchangeability of standardized parts was a major factor in the Industrial Revolution.

Standardization need not stultify. When men agreed upon a standard musical scale and a standard notation, musicians could play together. The result was not a damming up of creative forces. There are millions of melodies composed within the standardized vocabulary of music, and millions more to come.

The benefits of standardization for exchanging information are so obvious, I will not belabor the point.

Some Existing Standards and a Problem

In the field of public domain computerized information exchange several standards are in use and generally recognized as beneficial. The American Standard Code for Information Interchange (ASCII) is the standard for transmission of English text encoded into computer-readable form. The XMODEM standard for error-checking on the fly and immediate retransmission of garbled sectors of information is used by many systems for uploading and downloading of files. There are mutually beneficial standards for "formats" of messages, and programs, and text files.

However, because of continuing fragmentation in the area of databases, there is not yet any settled standard format for the transfer of public domain information in the form of list type data. Many database formats exist, and everybody still goes their own way. One guy uses dBASE II, another guy uses Personal Pearl, still another InfoStar. BASIC sequential files separate data items with commas, punctuate records with carriage returns. Other kinds of databases allocate specific lengths to every data item field. In the area of database formats we are still constructing the tower of Babel.



Impending Changes?

However, there are currently straws in the wind which indicate that the time may be ripe to agree on a standard for the interchange of database type information.

Before proceeding further, let's define what is meant by the term "database" within the context of this article. Arguably any computer-recorded information which can be accessed is a "database" in the general sense — A remote CP/M system which holds files and programs to be downloaded could be called a database, and indeed it is in the most general sense. But for this article, the term database refers to a special kind of computer file, a listing of many generically similar items, a collection of many short records each composed of the same specific parts (or "fields"). These list type collections of relatively short information records are what I mean by "databases." (At least for today that is what I mean.)

I said there were straws in the wind which pointed towards new possibilities for public exchange of database files. One straw in the wind: The following excerpts are from a message posted by Darrell Bross on the FOG system on 28 October 1984.

"How about a group dedicated to producing useful databases (contribute 30K of input and get your pick of databases) with a monthly newsletter . . . I have a lawyer laying out the ground rules . . . call me at 415-586-5788 or drop a card to Darrell Bross, 254 Winding Way, San Francisco CA 94112."

Another straw in the wind: In the October issue of the *FOGHORN*, there appeared an article by Aaron P. Morris about his file PORTABLE.DTA which is a database type listing of all articles which appeared in the *Portable Companion* magazine, indexed by subject, issue, page, and "misc" (additional information). Mr. Morris has freely contributed this information-finding aid to the FOG disk library.

An important statement in Mr. Morris' article says:

"The file is designed to be used with the program PCFILE. I have dBASE II and Personal Pearl, but I chose to use PCFILE since it is in the FOG library and therefore easily available to all members."

Proposal of a Common Medium of Exchange

Aaron, you said a mouthful. The program PCFILE is not only in the FOG library, it is floating all around in the public domain and works on many, many different computers. No-one will say that PCFILE is the "best of all possible" database management programs in existence, but it has the distinct value of being readily available to the public at little or no cost. The author, Jim Button, distributes the program on a voluntary contribution-for-use basis and people pay or not, based upon perceived personal utility of the program.

Whether one contributes or not (let your conscience be your guide) PCFILE can be used by anyone for the construction of data base type files, which files can be used by anyone else who also has access to PCFILE. (Though I have not tested exhaustively, I have every reason to believe that the compatibility of PCFILE data files extends across many, many computers, even across operating systems.)

The use of the PCFILE format as a lowest common denominator for the free public distribution of list-type information will not mean that users are limited to using PCFILE once they have acquired the information. Within the PCFILE system itself is a utility which will convert PCFILE data files to the "comma separated fields" type record in use by other database management programs. Utilities exist to convert those kinds of records to dBASE II and other formats. And although I don't yet know of a utility which brings comma separated field type records into PCFILE, I have no doubt that one would be quickly cobbled up should the need arise. Such a utility may in fact already exist somewhere without my knowing about it.

Public Database Files Based on Cooperative Efforts

What kinds of databases am I thinking of exchanging? Let your imagination run wild:

A wine list, by name, vintage, year, rating, price, availability.

Mailing list of all law firms in the San Francisco Bay Area, with a "Attn: name" for submitting resumes.

All the Charles Bronson movies on TV tapes available for rental.

Phone numbers for RCP/M systems. By area code, price per minute calculable from your own telephone exchange.

Index to *BYTE* magazine, past five years, by author, subject, title, issue, page, etc.

And so forth. A point I want to stress is that hardly anyone will volunteer to take on the effort of keyboarding an entire database unless he/she has a strong personal interest in the information. Even then the task may well be daunting. But if few will construct a complete database, many people may have enough interest and spare time to contribute a few records worth of keyboarding to some larger overall effort. For the price of access to a complete index of *BYTE* magazine, I might well be inclined to index an issue or two myself.

The worst thing about databases is building them up in the first place. Ugh! But if a dozen or so people cooperate informally, and there is no deadline, possibly something useful can grow on its own, kind of organically. This gradual approach avoids the staggering prospect of one person taking on the sheer labor of initial keyboarding which is involved if people mistakenly believe that an index has to be complete to be useful.

Such guerrilla databasing would have the social dynamic of a cooperative long range asynchronous sewing bee or barn raising. Anyone could download (or copy from disk) existing database files, add to them and resubmit an improved, enlarged, updated version. The accumulated efforts of several or more people will gradually lead to a valuable public resource. The participants get benefit not only from the actual information amassed in useful form but also from the process of learning about how to construct and manipulate simple databases.

Completeness is not a prerequisite to the use of many a cooperative database. A guerrilla database doesn't have to be perfect and does NOT have to be complete before it starts to be useful; after all, something is better than nothing.

The whole idea of community databasing is proposed as a live experiment in electronic Darwinism. I'll enter some favorite information and if you look in the database and see something missing, feel free to add it. I figure the best stuff would be most likely to get databased and if something doesn't make it into the file maybe it doesn't deserve to. Survival of the favorite items.

Darwinism is implicit in the whole idea: someone starts a file out, puts it up on a few boards and if it grows, fine. If it withers on the vine, maybe the idea is no good or won't work for some social reason I can't foresee just now. Then it would be back to the drawing board.

The overarching idea is guerrilla databases, informal data files, using the PCFILE format as a common medium of exchange.

Some Objections Answered

Anyone can participate, the more the merrier. This would not be a closed system. Newcomers can make a keyboarding contribution to an existing database, and anybody who participated would be learning how to use a database manager and could add records to some file as part of their training. Keep the whole process informal, keep administration to a minimum and trust the participants to do the job right. If somebody does screw up, somebody else can tidy up. If a vandal wrecks things, there would always be a prior version to go back and reconstruct from. And of course, even if the concept of cooperative database making does take off, I am sure there will be some databases that die a quick death due to lack of interest, no real usefulness.

Minimum supervision: If someone sees a little database growing and thinks a field should be added to cover zip codes separately or something, redesign is okay too. If someone sees where adding two more key words would make a record more searchable or accessible, be my guest.

As far as coordination goes, let whoever wants to coordinate do so. If a thing sends out tendrils and separate versions sprout through the happenstance of wild communications networking, so what? Let the bumblebees pollinate where they may. The existence of separate versions would soon be discovered and some Samaritan would probably be happy to merge the East Coast version and the West Coast version and come up with the Amalgamated Index as of such and such a date. If amalgamation and conglomeration leads to redundancy in a database, that is all to the good. Redundancy in such things as indexes or cross-reference catalogs is a positive virtue.

Conclusion

The key proposal in all this is for the use of PCFILE as the common medium of exchange for trading in and community work on lists of data. Not because it's best but because it's there. Standardization will facilitate exchange of information, and the standard to be arrived at should be available to the widest possible audience. You can't lay down the law in setting a standard (unless your name is IBM) but it doesn't hurt for interested people to nudge together in the right direction. This is my first nudge.

[OK, the second nudge is initial implementation; someone has to say, "I did it. I put a database, in PCFILE format, up on board # . . ." One more thing. By the time you read this, BYTE will have released an index of the 1983 and 1984 issues. A 48 page, hard copy is available for \$1, ppd. An electrically available index is promised. David]

• • • • •

Software Standards Please!

by Claude Ostyn

Your fresh copy of the latest applications disk from the local users group library slips into the drive. With trepidation, you call up ZYGLAMOR.BAS, the program that will keep you in shape better than a home gym or daily jogging. The program is fantastic, asks for your habits, then gives suggestions: "Press P to get a printout of your daily menu and exercise program", says the screen. So you press "P" . . . and nothing happens for a few seconds. Then your screen fills with strange graphics, the computer beeps as if in agony, and both disk drives start spinning furiously. The classical glorious Osborne 1 crash . . . Funny, it worked so well on Jill's machine at the meeting a couple of hours ago . . .

Something like this must have happened to you. The program probably made a direct call or reference to a memory address which is specific to a particular machine or a particular CP/M size. A frustrating number of public domain software utilities and even application programs work only with "standard" configuration of a "standard" machine, standard in this case meaning the configuration that happened to be the author's at the time the software was written or compiled. I should know: I wrote some of that kind of software myself!

Therefore, I would like to propose the following standards for software that we submit to the FOG libraries:

A. Classification and Labeling

The DOC file for each program or utility included in the general library should clearly indicate whether it will run without modification on any machine targeted for the library (Osborne 1, Executive, Kaypro, etc.), or on any CP/M machine, regardless of system size. If the software comes with an installation utility, this should be indicated also. Before submitting your software, we should try to test it in as many different environments as possible.

Programs which conflict with or need special additional software or hardware can be extremely useful; however, they should not be put on the same disks as more universal programs.

No program should ever be circulated without the accompanying DOC and, if applicable, other supporting files.

B. Programming Standards

1. Standards for "Universal" CP/M Software

Software will be considered universal only if it does not use any machine-specific functions, or if it comes with either an easy to use installation utility which includes a "plain-vanilla" machine or an overlay ASM file allowing easy patching for a variety of environments.



"Universal" assembly language software should use 8080 commands and legal BDOS and BIOS calls only, so as to be compatible with 8080, Z80 and 8085 CPUs. Any reference to any address in BIOS will be adjusted automatically by the program at run time through the use of the pointers maintained by CP/M in page zero of memory. BASIC and other high-level language software will not use any machine or implementation dependent CALLs, PEEKs and POKEs unless the target address for these commands is calculated at run time as explained above for machine language programs (see Listings 1, 2 and 3 for examples).

As much as possible, the programs will be ready to use without the need for exotic or expensive macro-assemblers or compilers. The installation utility or overlay file, if there is one, will not require a macro-assembler or compiler. While some software may only be assembled with a macro-assembler or a special compiler, any programmer capable of using these tools should be able to provide a patch area which can be easily customized through the installation program or, at worst, by using DDT (or SID on the Executive) and an overlay file (WordStar is a good example of such a program). Only the standard CP/M utilities and some well-documented, generally available public domain utilities (DDT, ASM, LOAD, DU, STAT, SWEEP) should be required for any implementation.

Some simple utility software is better customized by direct modification to the ASM source file followed by reassembly; in such cases, the documentation must clearly explain the procedure to follow.

2. Standards for Machine-Specific Software

New programs or utilities making direct calls to BIOS locations beyond the jump table or to the system ROM should be accepted in the general category for a specific machine (such as the Osborne 1) only if the calls are standard to all known versions of the ROM and BIOS for the target machine or if the program can recognize different versions of the ROM and BIOS and adapt itself accordingly.

The additional overhead for this is very small compared to the benefits of portability and general ease of use. For instance, the blinking cursor, arrow key change and background printing enhancement patches which I installed in my WordStar, follow these rules, so I can use the same WS.COM without worrying about whether I booted my Osborne 1 with or without the JG clock software. My CP/M menu program FRONT.COM, when installed for the Osborne 1, detects whether it is indeed running on an Osborne 1 and what BIOS version is in effect; it then sets the menu width according to the available screen width. An automatic self-installing version of ZCPR meeting similar requirements would be wonderful (anyone out there?).

3. Configuration-specific Software

Some very useful utilities are developed for special hardware or software configurations. For instance, I have a short program which reads the JG Communications Clock and installs the date in the memory location used by SuperCalc 2, then runs SC2. There are patches or utilities which take advantage of particular printers or computer accessories, or

that expect a certain unusual arrangement of the files on the disks. The restrictions on this type of program should be clearly identified, and as much as possible the program itself should try to make sure the configuration is correct rather than just crashing the system blindly when it is not. Any program should be designed so as to cause no irreversible damage to files when it is used by mistake. I have seen a clever SUBMIT program gleefully erase, without any warning, a whole original disk which happened to be in the wrong drive. There was no backup, of course . . .

4. User Interface

A user-friendly program does not have to be a tedious menu-driven monster, but it should try to anticipate the user's needs and fears. How many programs do you have that can supposedly do wonderful things, but are just wasting room on your disks because they are too aggravating to use or to figure out? I have dozens of them, which for some obscure reason I keep along with those dozens of books that I should read "someday".

At the very least, a program should identify itself when it is run. A surprising number of them don't even do that much. The program should do everything possible to trap your mistakes instead of going off into yonder land or deleting files by accident. There is really no excuse for software that crashes with the "Bdos error on x: R/O" message the first time you try to save the data you've been entering for the last forty minutes, or that won't allow you to save to another disk after finding out that the current one is full.

Even if the program expects parameters when you call it up (like STAT), it should still allow you to enter the parameters after it has been loaded (like PIP).

A frustrating feature of Turbo Pascal is that, while it allows you to call another program, it will not pass along any command line parameters. After running out of room on my Pascal working disks several times, I figured I needed to use something like XERA.COM or ERAQ.COM to erase the unwanted BAK files without exiting Turbo. Lo and behold, they won't work unless you give the file name on the command line. I have since corrected the problem with ERASE.COM which will prompt for a file name if it was missing from the command line, but why should anyone have to go through that rigmarole?

Another thing I try to build into all my software is some indication of what is going on. Don't you hate those programs where you start a sorting operation, and you don't know for several minutes (or hours) whether the thing just crashed or has actually been working? Losing a little speed and a little space is a small price to pay for the comfort of an on-screen counter or display of how the program is progressing. When you can see that in one minute five percent of the job got done, that gives you a good indication that you can relax: it is actually working and there is time for a cup of coffee or a short walk. You won't miss a thing.

C. Documentation

No program should be distributed in any users' group library without at least enough documentation to understand

what it does. But beyond that, programs for infrequent use should be self-prompting. For instance, TXTSAVER.COM, which is called up only rarely to attempt to recover text after crashing WordStar, would not be very useful if you had to look up the documentation whenever you need it. After a WordStar crash, one is usually not in the mood for such civilized behavior. Therefore, when you run TXTSAVER it explains briefly what it will try to do and gives you specific and simple instructions on what to do.

Any information which helps in making programs adapt themselves to their environment should be widely circulated. Maybe the FOG Hackers library could contain a compilation of this type of information. Most BIOS implementations have a unique "signature" somewhere that could be used to make a program try to identify which machine it is running on and take advantage of whatever features are available. The listings below are examples of some simple entries that could figure in such a generic "compatibility" library.

Listing 1.

This listing is for MicroSoft BASIC (BASIC-80). It is an example of a self-adapting routine to implement the printer ON/OFF toggle (same as effect as by typing ^P in CP/M) to echo the screen to the printer from inside a BASIC program. It should work without any modification with any standard version of CP/M 2.2 and any system size.

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```
60000 REM PRINTER ECHO TOGGLE SUBROUTINE
60001 REM First find the address of BIOS
60002 REM (using the warm boot vector), and
60003 REM adjust to point to the CONOUT jump
60004 REM
60010 CONOUT = PEEK(2) * 256 + &HOC
60011 REM
60012 REM Check if it contains a 'jump'
60013 REM or a 'call' instruction
60014 REM and toggle from one to the other
60015 REM (line 60020 should be typed as one line)
60016 REM
60020 IF PEEK(CONOUT) = &HC3 THEN POKE CONOUT, &HCD
      ELSE POKE CONOUT, &HC3
60030 RETURN
```

Or if you prefer separate subroutines to turn the printer on and off:

```
60040 REM PRINTER ECHO ON SUBROUTINE
60050 POKE (PEEK(2) * 256 + &HOC), &HCD : RETURN

60060 REM PRINTER ECHO OFF SUBROUTINE
60070 POKE (PEEK(2) * 256 + &HOC), &HC3 : RETURN
```

Listing 2.

This is a Turbo Pascal function to check the printer status. This routine, as far as I know, will work with all standard CP/M 2.2 implementations except the Apple Softcard; this is an example of using a built-in function of the language to avoid system-dependent calls.

```
function Printer_Ready: Boolean;
begin
  Printer_Ready := (Bios(14) <> 0)
end;
```

The following Turbo Pascal subroutine toggles the printer echo of the screen on and off; it uses the pointer variable ConOut to point to the CONOUT vector in BIOS, and will not toggle the printer ON if it is not ready (to avoid system hang-up).

This is a case where it may be better to compile a separate version for the Apple Softcard in which you would omit "and (Printer_Ready)" since the corresponding BIOS function will not work correctly with the Softcard.

```
procedure Toggle_printer;
var
  high_byte_of_bios_pointer : Byte absolute $0002;
  ConOut                    : ^Byte;
begin
  ConOut := Ptr( high_byte_of_bios_pointer * 256 + $0C );
  if (ConOut^ = $C3) and (Printer_Ready)
  then ConOut^ := $CD
  else ConOut^ := $C3;
end;
```

Listing 3.

This is an 8080 assembly language subroutine to illustrate how easy it is to find the base address of the BIOS and store it at a convenient location.




```

BIOSFND:  LHL D 1      : get warm boot pointer
          MVI L,0      : zero low byte of pointer
          SHLD BIOSPTR  : store pointer at BIOSPTR
          RET
BIOSPTR:   DW  0,0      : BIOS base address - value set at run
          : time
          * * * * *

```

The Huffman Code For Text Squeezing

by David Busch

Most of us who own modems have been using the squeeze and unsqueeze (SQ.COM, USQ.COM) programs before and after sending files for some time. Many are astonished when they find that these programs really work. It's like a miracle of number crunching bordering on the supernatural. I hope to take some of the mystery out of the subject of file compression.

Most of the file compression tools out now, use Huffman coding. Huffman coding can compress text about thirty five percent, depending on the type of text as you will see later.

Normal text files are a mixture of ASCII character codes. ASCII (American Standard Code for Information Interchange) is the character set used on most smaller computers. It contains all the English letters capital and small, digits zero through nine, punctuation characters, and control characters that do not print. There are a total of 128 characters in the set. And, it's no accident that there are 128. The ASCII character set is a 7-bit set; that is, it takes seven bits to represent one character. Since computers work in binary, each bit can either be a zero or a one. That means there are two possibilities for each bit. And, 2 raised to the seventh power is 128. What a coincidence.

But, how can we squeeze text if each character in the ASCII set MUST be represented by seven bits? Simple, switch character sets. We use certain characters much more often than others. So far I've only used four z's in this text. But, I've used seventy three a's. It would save quite a bit of memory space if the representation for frequently used characters was shorter than the representation of infrequently used characters. This is basically what the Huffman code does. And, that's why it is called a frequency dependent code.

But, every document has a different frequency of characters. So, the program that does the squeezing should first analyze the document to see what percentage of the time each character is used. A simple way is to find the frequency of each character in "average" text and use that rule to squeeze all text files. This second method will probably give adequate results in most cases. But, if you want to squeeze files comprised mainly of numbers or command files (filename.COM) that don't use a character set, it will not work. In fact the result may be larger than the input file.

After the squeezing program has computed the frequency of each character in percent it constructs a "tree" in memory.

This tree will have the character codes and their frequency percentages at the top of the tree. They become the leaves. Then, the program draws two connecting branches down from the two characters of the smallest percentage. Where these two branches connect, the program forms a "node" or connecting point in memory. Also, at this point it stores the sum of the percentages of the two leaves that were connected. The program then looks through the list of characters again to find the next two least used characters. This time it doesn't consider the two leaves that were connected together last time. But, it does consider the sum of the percentages. After it finds the next two characters it repeats the branch drawing procedure. The program continues doing this until there are no more characters left. Now, to clear any confusion, let's look at an example.

Let's say that we're squeezing a file of only digits zero through nine. The squeezing program has looked through our text file and found the frequencies of each digit. This is what it found:

character:	0	1	2	3	4	5	6	7	8	9
frequency:	.21	.23	.16	.08	.07	.06	.05	.05	.05	.04 (%)

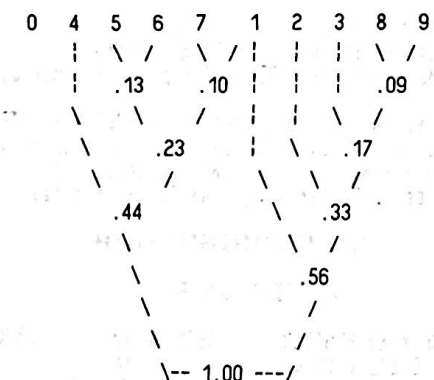
Now, the program looks through the list and finds the two characters used least. It selects the "8" and the "9". Next, it draws a branch between the two and adds their frequencies.

character:	0	1	2	3	4	5	6	7	8	9
frequency:	.21	.23	.16	.08	.07	.06	.05	.05	\ /	(%)
									.09	(%)

Next time through the loop it will look like this:

character:	0	1	2	3	4	5	6	7	8	9
frequency:	.21	.23	.16	.08	.07	.06	\ /	\ /	\ /	(%)
							.10	.09		(%)

This will continue until all characters are used. The result in this case will look like this.



Now that the tree is finished, we consider each left branch a zero and each right branch a one. To find the Huffman code for each digit we follow the tree from the base to the leaf and count the zero's and one's as we go. So, in order to find the Huffman code for the digit "6" we first go left to .44 then right to .23 then right to .10 and finally left to the digit "6". This gives us a code of "0110", which represents the digit "6". The table for all of the digits is as follows:

DIGIT	HUFFMAN CODE
0	00
1	10
2	110
3	1110
4	0100
5	0101
6	0110
7	0111
8	11110
9	11111

As you can see the shortest codes are assigned to the most frequently used characters.

The string "012" in Huffman code will look like this in binary:

0010110 (seven bits)

The same string in ASCII will look like this:

001100000011000100110010 (twenty four bits)

The string in Huffman code can be represented using only one byte of memory. The string in ASCII requires twelve bytes.

That can represent quite a savings after squeezing an entire file.

All our squeeze program needs to do now is to read each character from the source file, translate it to Huffman code and write it to the output file. Notice that since each character code has a different length you will have to store the code in "parts" of a byte. Also note that you **MUST** save the translation table at the beginning of the output file. If you don't know how to translate the Huffman code back to ASCII you will only have a file full of garbage left.

When you want to unsqueeze the file, the program will read one bit at a time from the squeezed file and compare it to the codes in the translation table. It keeps reading bits until the bit string represents a valid character code. Then, it writes that character in ASCII into an unsqueezed output file. Now, it starts reading bits again until it finds the next valid code. And so on until finished.

You may have guessed that translating Huffman code is very prone to error. If only one bit is read wrong the program will lose track of the boundaries between characters. The result will be garbage. Therefore, some sort of error checking is highly recommended. But, that is a subject for another time.

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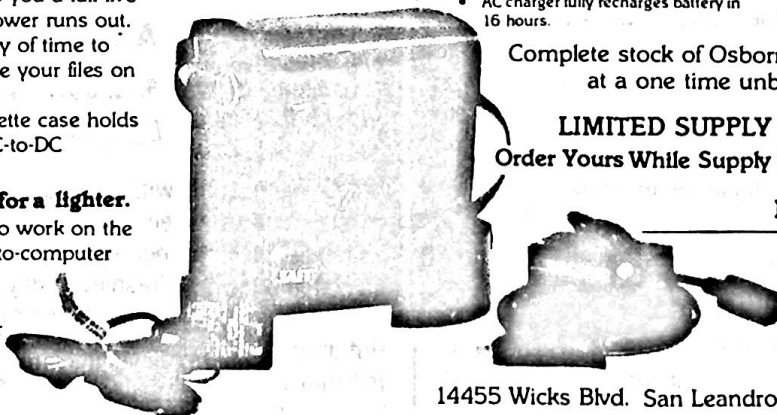
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BOOK REVIEWS

Review of CP/M Programmers Encyclopedia

by Gary Shaner

CP/M Programmers Encyclopedia
By Bruce Brigham
Que Corporation
Indianapolis, IN
\$19.95

The CP/M Programmers Encyclopedia is a book that will appeal to experienced users whose book shelf has become cluttered with an assortment of reference books. The purpose of the book is to consolidate into one source the commands and proper syntax for CP/M 2.2 and 3.0, and the popular programming languages of CBASIC2, PL/I-80, PASCAL/MT+, dBASE II, MBASIC 5.2, MICROSOFT BASIC COMPILER, FORTRAN-80, MACRO-80, LINK-80, LIB-80, CREF-80.

Additional information is provided on system calls for both CP/M versions. Assembly language mnemonics and hex opcodes for the 8080 and Z80 instruction sets are included.

The book does not attempt to teach you anything new. Its sole purpose is a handy reference when you forget the spelling or proper syntax for some infrequently used command or operation.

It is organized with a detailed table of contents and an alphabetical listing of commands by language. Each language has a single list so you do not have to remember if you should look up a function or command. Using the book is quite fast since you can go directly to the language you need and then scan the listing for your key word.

Each command has a statement of the command, a concise explanation, and a specific example. I find the explanations are frequently clearer than those found in the Osborne users manual.

A typical listing from MBASIC is:

INKEY\$

Returns either a 1 character string read from the terminal or a null if no character is pending at the terminal.

Examples: 100 ASS=INKEY\$

100 IF LEN(INKEY\$)=0 THEN GOTO 100

From CP/M:

A) STAT SAMPLE.PRN \$R/Ocr

Sets the file SAMPLE.PRN to read-only (CP/M2.X) and updates directory. (File remains RO during future cold starts.)

It is very handy to have one source that will answer your questions. Some of the system information is not found in the Osborne manuals and is quite useful.

The Free Software Catalog

by Jim Remich

There is a fantastic new reference book that should be on the bookshelf of every CP/M user. It has short descriptions of possibly 4000 FREE programs that are available today. The book is titled:

THE FREE SOFTWARE CATALOG and DIRECTORY

By: Robert A Froehlich

Publisher: Crown Publishers, Inc
New York, New York

This book is a super value and is a jammed packed 480 pages. It is about the size of a phone book. It costs only \$9.95. I purchased my copy at B Dolton Book Store.

Some of the main topics are titled:

1. Free software and its sources.
2. Overview of user group libraries and using source files.
3. Selected free program documentation.
4. Getting more from free software, CP/M, and your computer.
5. Catalog of CP/MUG disks #1 thru #92
of SIG/M disks #1 thru #162
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The Sensuous WordStar

A Review of

UnderGround WordStar

by Dick Ezzard

My relationship with WordStar is comfortable but rather staid in that we haven't tried anything new for quite a while. I remember back to our first days together when there was something new and fresh everyday, and I was entranced with the emerging capabilities of me and my WordStar together. But gradually there was a dropping off of excitement, and we fell into a routine engagement. We got along together very well, but the early magic was gone.

So you will imagine my delight in finding a new sex manual for WordStar and WordStar users. The book I refer to is *UnderGround WordStar* by Ward Starr and Mel Murch. The heavy-handed pseudonyms are off-putting at first but turn out to be not fatal. For once past the jokey byline and into the text I found several ways to soup up my languishing affair with WordStar. Even after all these years.

UnderGround WordStar is probably not for beginners, but the practiced WordStar user who browses the book will be rewarded. All but the most jaded and sophisticated user will learn some new tricks which can add a certain zestiness to old WordStar.

The book is an easy read, consisting of only 80 pages, about forty percent of which is tables. The format is typewriter manuscript, very legible, and clear evidence of self-publishing (a cottage industry enterprise which is a haunting temptation to every WordStar user who has information to impart to the world). Without checking Bowker's I dismiss the publishers imprint, "HARD/SOFT PRESS / A Division of Hard/Soft, Inc.," as another ill-advised attempt at humor by cutesy appellation (which does not carry forward into the book itself, thank goodness).

The text itself reads conversationally, and the effect is like listening to informed advice from a well-grounded user who speaks practically and plainly with only an occasional lapse into the jargon of documentese. The specific system addressed is WordStar version 3.3 running on an IBM machine but the book is worth browsing by the user of any type of WordStar (except the new WordStar 2000 which is so different as to really be another type of animal completely). Even though geared to WordStar 3.3 on IBM's, from the specific information furnished in *UnderGround WordStar* any practiced patcher of WordStar will find it relatively easy to interpolate addresses and adapt patches and modifications to his own specific system configuration. I use the old WordStar 2.26 on a CP/M machine and was able to effect some immediate changes without untoward difficulty.

The first section of *UnderGround WordStar* is a collection of tips on obscure and not so obscure WordStar commands, or "The Documentation Revisited" by a sophisticated user. The author reviews and explains esoteric commands which many users may have never learned or have perhaps forgotten. If you have fallen into the trap of using only a convenient and comfortable subset of the WordStar capabilities, running through this first section may well remind you of something you once meant to try out but never got around to. There is not any particular organization to this "WordStar chat" section that I could discern, and the effect is like listening to a couple of experienced users tell each other about nifty WordStar commands, in the order they just happen to come to mind.

Then there is a short section outlining good techniques for recovery from the dreaded "disk full" error — ways to safely make space on disks from within a file. This error is largely a thing of the past due to present-day high-capacity disks, but I can remember when single density disks holding only 90K meant that "disk full" was a frequent interruption and every WordStar user needed to know what to do when that alarm sounded.

He also discusses recovery from a WordStar crash with no file save, specifically, how to use DEBUG to retrieve the most recently typed material from RAM. Since DEBUG is an MS-DOS utility, users of CP/M WordStars will need to do a lot of interpolation to convert these instructions for use with DDT.

The non-document mode of WordStar is explained for neophytes but the explanation is so over-simplified that it constitutes nothing more than a reminder that there is indeed a good deal of difference between WordStar document files and "pure ASCII" material.

There is a fine section on MailMerge reformatting — printing files on paper in a format which is different than the saved format on disk. He specifically addresses changing margins on the fly for printout to paper and changing the line spacing.

The benefits of running WordStar on some sort of RAM disk (he calls them "fake disks") are discussed, and rightly so. Probably the greatest thing you can do to give new life to your WordStar is install a RAM disk of some sort, either a memory add-on, or a software implementation that reconfigures a section of existing memory. Talk about catnip, coffee, cocaine, and other chemicals — watch WordStar work out under the stimulus of a RAM disk and you will see instant Performance! The great thing is that there are positively no ill effects.

UnderGround WordStar gives only one page of discussion to methods of cascading WordStar commands through the use of "macro-making" keystroke interpreter programs. The definitive article on this technique has not been written yet, and it deserves more extensive treatment. I have seen tailored control keys which at the touch of one key cascade all the commands necessary to move the paragraph within which you are working to the end of the file. Or to another file. *UnderGround WordStar* only mentions ProKey in this discussion, omitting comparison with other fine utilities of this ilk.

Another subject which gets short shrift is the topic of rigging WordStar to do proportional printing on appropriately endowed printers. However, there is a reference to another book on that subject where proportional spacing is covered in depth — with the correct warning that "you'll need a whole book to show you how."

Where *UnderGround WordStar* really shines is in the extensive, detailed information it gives on the customization of WordStar. One is advised that it is perfectly proper (well, perhaps a little racy) to maintain a stable of multiple WordStars with different versions customized to different tasks. As mentioned previously, most of the customizing information pertains to the specific case of WordStar version 3.3 running on the IBM family of computers, but general customization information provided allows interpolation of specific patches to other versions. In fact part of the value of *UnderGround WordStar* is in the strategies given for interpolation of information about various versions of WordStar.

The appendixes of the book consist of 21 pages of detailed info. on using the DEBUG utility to modify WordStar — nitty gritty information such as what addresses to go to and what changes to make in order to create what effect. The reader is provided with the tools to completely change the effects of the IBM function keys should that be desired. Color outputs can



be modified, including adding color to older versions of WordStar and changing the colors used for such things as document borders.

And *UnderGround WordStar* provides the best introduction to modification of WordStar's internal keystroke dispatch tables that I have seen in general print. You are shown how the commands you type at the keyboard are interpreted by WordStar itself and you are shown how to change the commands should that be your desire. Talk about new life for WordStar, this is the Kama Sutra of the keystroke dispatch tables.

Tinkering with the keystroke dispatch tables will allow you to change commands and also to add redundant commands (so you have more than one way of getting something done). For example, you could fix your WordStar so that striking the left square bracket key marks the beginning of a block (in addition to the old method of striking the control key, the K key and the b key).

One great tip I carried out immediately was to change the command for deletion of a line from ^Y to ^Y^Y. If you use ^T a lot to delete words, undoubtedly you have at some time lost a line by accidentally striking ^Y. With this little patch, the dangerous ^Y command is fool-proofed so that you have to strike it twice in order to lose a line. So far I haven't managed to do that, but the change to ^Y^Y has saved me a line several times already.

Underground WordStar provides seven pages of keystroke dispatch table addresses, as well as the detailed info. on how to modify them and this alone is worth the price of admission. In addition there are five pages of more general patch addresses for WordStar 3.3. If you want to teach WordStar new tricks this book may be all you need, especially if you run version 3.3 on the IBM family of computers.

In comparison with other books about WordStar which are flooding the market, I would say that this one contains some unique information and compares most favorably. The run-of-the-mill WordStar book is often just a rewrite of the documentation for users of bootleg WordStars who need to learn how to use WordStar from the ground up. You could not use *UnderGround WordStar* for that purpose — The book is for the practiced user who is already comfortable running WordStar.

And although small in size, *UnderGround WordStar* doesn't duplicate the documentation much, so is free of padding. I think it's quite likely that the heavy WordStar user will find one or more useful tips in here that will repay a minimum effort expended in browsing *UnderGround WordStar*.

Order *UnderGround WordStar* from:

Hard/Soft Press
PO Box 1277
Riverdale, NY 10471

The price is \$14.95 plus \$2 first class shipping.

[There have been several nifty ways to recover from a CP/M, WordStar crash detailed in past issues. You don't need to use DDT to do it. Check the *FOGHORN* indexes (November issues). David]

• • • • •

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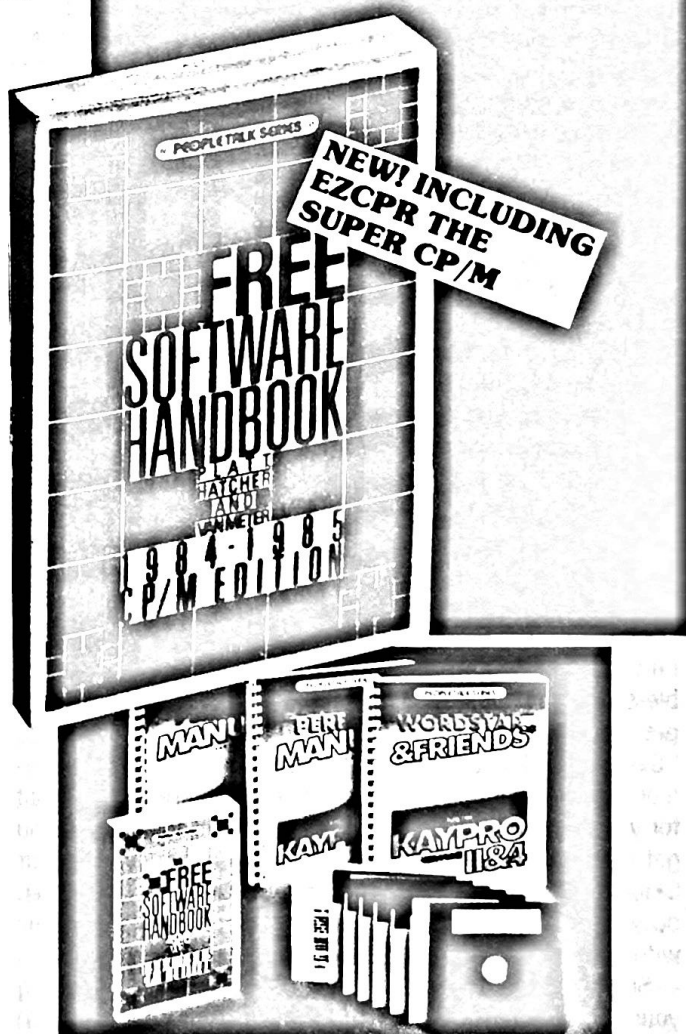
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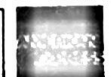
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HARDWARE REVIEWS

A Printer Buffer That Won't Break the Bank!

by T. J. Kring

I've read numerous software and hardware reviews in the *FOGHORN* over the past years and often wondered . . . what's this person getting [in return] from the company? Rarely have I seen bad reviews of software, and I don't think I've ever seen a bad review of hardware. Well, I suppose I should have contacted the makers of the product I am about to review, since it will sound like free advertising, but I think a company that sells a quality product for a reasonable price deserves a free "pat on the back."

Several past *FOGHORN*s (Sept., Oct., 1984 and Feb. 1985) have reviewed or commented on a few of the available printer buffers (Quadram, Printer Optimizer, Drive C, etc.) and all have sung their praises yet ask you to swallow the often hefty price tag (up to \$500 for 64K). A company called Digital Devices (430 Tenth St., Suite N205, Atlanta, GA 30318 (800) 554-4898) sells a product called "Printer Buffer" (catchy, huh?) in a 16K version for \$119.95! The product is user-expandable (without invalidating your 1-year warranty) with IBM PC-compatible memory chips (assuming you can handle a Phillips screwdriver). I have the 64K version which rings in at \$195.00 (they'll sell it in 16, 32 or 64K parallel versions). It has its own power supply and is in a small box which you can stick anywhere. I've used it with WordStar, SuperCalc and Basic routines, all without a hitch. WordStar likes to "diddle-around" when printing, and takes a little longer to load files into your buffer. You can "TYPE" or "VLIST" a 32-page double-spaced document to the buffer in about 29 seconds. Forget to turn your printer on? You won't see that dreaded "Device CENT not ready, unassign this device? Y/N" anymore. Printer Buffer has your document in there and will wait for you to get your act together. If your paper fouls up, or you get a phone call and don't want to woo your honey with your Okidata SCREAMING in the background, de-select the printer, do your business, then re-select and the print will continue without a hitch.

So, if you don't want to sit there and watch your printer hog your computer (esp. if its a daisywheel) and would rather: 1) open some other file, 2) load some other program, or 3) turn off the computer, then think about a buffer. If you aren't independently wealthy, compare the prices yourself! The feature which MAY be found on the more expensive buffers, but which is NOT included with "Printer Buffer" is a "copy" button for printing multiple copies (but try Merge-printing [a WordStar function] to your buffer!). [Author's Note: Drive C:, now by

WestWind, is much more than a printer buffer, and is not directly comparable as such.]

T. J. Kring, Dept. of Entomology, University of Arkansas in Fayetteville, Arkansas.

.....

Epson PX-8 Geneva

by Conrad Stenton

How to describe the EPSON GENEVA? That is a difficult question. Imagine an Ozzie that goes to sleep if you don't use it for a few minutes. Not only does it go to sleep but it wakes up exactly where you left off! Even if it is in the middle of WordStar.

It is battery powered, weighs in at 5.1 pounds, measures a diminutive 11.7 by 8.5 by 1.9 inches and has a small screen, 8 lines by 80 characters, to make the Osborne users feel comfortable. The Osborne has 24 lines by 52 characters, that makes it ahead by 648 characters. This is not really true as the screen is a window into a 24 line by 80 column display scrollable by the usual CTRL arrow keys. The screen can even be divided into two screens and you can flip back and forth from one to the other. For example one can do a DIR on the main screen and then do the ERA in the second screen without having the DIR info. roll off the top.

Imagine a full size keyboard and the complete package that easily fits into your briefcase. It has a Z80 processor running at 2.45 MHz (which is slower than our Ozzies). The micro-cassette tape system looks for all the world (other than speed) like drive H. All the usual commands are used to access it. To speed things up its directory is saved in memory and only written to the head of the tape when you wish to remove it.

The system display, is always accessible (CONTROL HELP) and allows you to control the tape drive as well as access the password system, the alarm/wake up features, the autostart feature, the menu, and Micro Cassette Tape modes.

The password feature is well implemented, and if you forget it you will have to wipe out all of your ram disk to reset it. The alarm/wakeup is a nice feature that uses the built in clock to turn the computer on, or interrupt you with a tone and message, or run a program at a certain time.

The Autostart feature is nice and I have set mine so that the computer always starts up in WordStar, logged to the RAM disk A:. The other option is a menu front-end for those who don't want to mess with CP/M.

There are five preset function keys in WordStar, ^OL<ESC>, ^QR, ^PS, ^QC, ^OR<ESC>. This leaves only the shifted five for your use in WordStar. I think the five they chose are not the most useful five, but the five left can contain up to 15 characters each, and the lower five are available for non WordStar use.

Portable WordStar (WS) has almost all the power of version 2.26, but can't be customized with your favorite defaults. Missing are the ^OD command, and some of the dot commands are inoperative with the portable printer. It also will

overwrite a file without asking. You can only edit on the A drive but you can read files from and save blocks to drive H.

The Printer is installed for the EPSON (no surprise there) and the companion printer P-80 is a battery powered thermal printer. Compressed expanded ^Q^E is my favorite type face.

The usual CP/M 2.2 utility programs are supplied on the UTILITY ROM (i.e. PIP, STAT). Of course all the built in CP/M commands are there. As CP/M is ROM resident you have 24K of RAM usable as RAM-disk. This number depends somewhat on what ROM programs you wish to use.

The UTILITY ROM also contains a terminal emulator (TERM) which we have used successfully with an IBM series 1. There is file transfer utility (FILINK) which works for EPSON to EPSON.

BASIC is an expanded version and is on its own ROM. Having been seduced by dBASE II, I have not tried the BASIC. They are even promising a ROM with dBASE III!

The Portable Calc (PC) and the Portable Scheduler (PS) eat up some of this available RAM disk. You only have 16K left if you wish to have all three, WS, PC and PS in heavy use.

The Scheduler program is easy to use but only schedules out one month, and keeps no history. But it is nice when the computer beeps in the middle of a creative spurt in WordStar to remind you to pick up your Valentine's day flowers before the florist closes.

There are of course a number of things designed to drive the Osborne user crazy!

- (1) The keyboard has the : together with the *, and the = is above the -. But here are separate keys for ^ (CTRL ?) and the || (curly brackets), as well as INS, BS & DEL keys. There are even two CTRL keys! This is especially good for one hand typing WordStar commands. There is a key to give you a keypad for intensive numeric entry and a key to give you access to the graphics set. This includes a plane, telephone and wine glass used by the PORTABLE SCHEDULER program.
- (2) There is no good way to upload info. to the Osborne. At present I am using PIP, this strips the 8th bit changing the document into a non-document. I then change it back using WSDOCON (FOG/UTL.???) or FILTER4 (FOG/UTL.057). [John Gladfelter uses PIP and Micro Link, see his article in the March '85 issue, page 69; Charles Martin uses Modem712 and EPPXMDM, see his article which should be in the **SYSTEM NOTES** section of this issue. David]
- (3) In WordStar, you can't see the directory! Nor is there any R command. There is Send and Receive commands but no documentation on their handshaking or protocol.
- (4) Documentation is excellent with more books on the machine and the software than you will want to read at one sitting. There are even indexes.

There are a number of accessories to expand the storage capacity, including a battery powered micro disk. There are even two varieties of modems.

Support from Epson is more than excellent! I wrote to EPSON Canada to find out how to transfer files. I received a

phone call the next day and was put in touch with a person who is trying to find out how to do it.

Not wanting to leave any stone unturned I also wrote to EPSON USA, I received a phone call from them within the week. They said that they were aware of the problem, that they had utility programs to solve the problem and if I had a modem I could have them then and there. Now that is what I call service above and beyond the call!

EPSON Canada has a user publication, **EPSON LINK** and a Bulletin Board in Toronto.

Does anyone have any idea what the phone number is?

There have been reviews of the GENEVA in **BYTE** (February 1985) and in **POPULAR COMPUTING** (March 1985). These I read after I had purchased my EPSI (Sorry I can't help naming my toys, My Osborne is called OSCAR, and the XEROX (DIABLO) 1740 is called XENIA).

In conclusion, even if I had read the reviews before buying my GENEVA I would still have purchased one and highly recommend the EPSON PX-8 GENEVA the perfect traveling companion for the Osborne owner!

* * * * *

Centroid Big Stepper Motion Controller

by Gary Shaner

This item will appeal to those who are engineers or are involved in manufacturing and have an interest in motion control and machinery automation.

Motion control is one of the most frequent needs in any machine or mechanical operation. When I first saw the Big Stepper advertised last fall it looked like a practical and economical solution to automating some operations in our screen printing business. At a price of \$925, I could control 4 motors for the same cost that I had previously estimated for one. By mounting an Osborne 1 and the Big Stepper on a cart and using quick connect plugs we could have a general purpose control unit which could be moved from machine to machine. This allowed automating several intermittent operations which did not justify the expense on an individual basis.

The Big Stepper is a computer which is designed to control stepping motors. It is controlled by any computer through the RS232 serial port. This permits the host computer to be programmed to determine what the next motor move should be and transmit the command through a simple text string. The Big Stepper then determines and controls the motor movement while the host computer is preparing the next command.

Indexing and positioning applications can be rapidly accomplished even if the movements are not repetitive and not effectively controlled by simple switches. By transferring complex control operations to the computer it is practical and much cheaper to build one-of-a-kind machines for special purposes.

The standard smart Big Stepper is designed to control 4 stepping motors and read inputs from 8 limit switches. It is configured so the limit switches may be either micro switches or opto-electronic. Motor output voltage options of 5, 14, and 28 VDC are offered. Using the proper motor resistors permits step rates up to 2000 steps per second. Serial baud rates of 300-9600bps are jumper selectable.

Other options include: a dumb parallel version which uses the host computer for the motor control commands; A smart version with on-board Basic permits unattended operation after it is programmed from the host computer; and a smart version with numerical control capabilities.

Establishing communications is simple since the Big Stepper requires only transmit, receive, and signal ground. In spite of that it took about two days of fiddling around to get the correct jumpers on the Osborne end. Modem7 was then used to communicate with Big Stepper. The terminal program works well for experimenting. This eliminates programming until you understand how the machine works. The device responds like a printer so it is connected through the printer port.

The **STEPPING MOTOR COOKBOOK**, written by the developer of Big Stepper, is included with the machine (also available separately). The author is a practical guy and provides straight forward information on how to make the whole system function properly. I had only a passing knowledge of stepping motors. Little difficulty was encountered in setting up the mechanical system.

The most troublesome programming problem was developing a machine language routine to input responses from the controller to a Basic program. It was desired to insure that one operation was complete before starting the next. This required the Big Stepper to respond to a motor status command. The memory mapped output of the Osborne 1 does not permit the INP() input port read command in Basic so it was necessary to develop a substitute. It would have been fairly easy if I had not had to learn assembly language first.

Only a few very simple commands are required by the Big Stepper.

Examples:

S,1,200,F,1000	STEP, motor 1, 200 steps/sec, Fwd, 1000steps
L,3,5,9,10,6	LOAD, motor 3, full step pattern
D,2,50,300,Y	DEFINE parameters, motor 2, 50 steps/sec initial rate, 300 steps/sec/accel. rate, Y use deceleration.
M,1	MOTOR status, motor 1, 0-stopped, 1-moving

Other commands permit unison stepping of several motors, inputting switch status, pausing motors, returning running time. This is not a complete list but the most used.

The Big Stepper is very flexible in operation. Motors can be started and stopped independently or simultaneously. Short cycle operations can begin and end while long cycle operations are running. With the UNISON command three motors

can be stepped together to produce 3 dimensional straight line movement. Limit switch inputs and PAUSE or HALT commands facilitate safety overrides. Acceleration and deceleration patterns can be adjusted to compensate for problems of high inertia loads. Proper programming can utilize unused motor outputs to control up to 4 relays. Stepping motors can be operated independently on a full or half step pattern (200 or 400 steps per revolution).

The primary limitation is the machine is intended for straight line movements. It will not perform complex curve tracing. Possibly the numerical control version will do this since it costs twice as much. [?]

Since the first advertisement for the Big Stepper, I seen ads for two other similar devices. Apparently electronics is beginning to provide inexpensive solutions to mechanical problems as have been achieved in word processing.

If you have an interest in small quantity automation it would pay you to take a look at the Big Stepper or similar devices. It will save me about two years time in accomplishing some desirable projects.

Source: Centroid Corporation

P. O. Box 739

State College, PA 16804

Drive C:

by Charles Bailey

Recommendation

Drive C: is recommended for those who:

- Spend a significant amount of time working on their Osborne.
- Have trouble fitting long jobs into short spaces of available time.
- Enjoy instant response to keyboard commands, and dislike waiting for disk drives to spin for 20 seconds or so everytime a program goes to read or write to a disk.
- Enjoy working with disk drives that make no noise whatsoever.
- Worry about wearing out disk drives. (If you plan it right, Drive C: will allow you to do most of your work without using your floppies for anything except initial loading of programs and data files and saving your work when you are finished.)

Benefits

- Speed
 - 2 sec (vs 16 sec) to load SC2.
 - 8 sec (vs 19 sec) to load a 14K SuperCalc file.
 - 38 sec (vs 1 min 33 sec) to run a 14 line .XQT file which loads data from 5 files less time to move from the top to the bottom of large WordStar files.
- Quiet, there is no noise created during the Drive C: operation.
- More efficient work environment. It doesn't slow you down or distract you.

- Interactive use of large systems. With 384K RAM, you can load both WordStar and SpellGuard plus utilities onto your RAM disk and use them interactively.
- Data storage. Archive programs that come with Drive C: allow you to reduce (slightly) the amount of space required to store your data files. Savings is about 1K per file.
- Less wear and tear on your floppy disk drives?

Disadvantages

- System overhead: Full set of Drive C: utilities requires 40K of space on your system disk. This will probably require you to reorganize the contents of your system disks and some of your data disks.
- Load time: My machine takes 53 sec to initialize Drive C: and to load all SC2 programs plus additional utilities when I use the Archive utility that comes with Drive C:.
- Extra care is required to avoid losing work. It is easy to forget to move updated data files from Drive C: back to floppy disk for permanent storage.
- Time is required to reorganize your program and data disk systems to take full advantage of Drive C:'s capabilities.
- Time is required to go through their manual. It is very good, but has 140 pages.
- Cost may be a barrier to some, but Drive C: may be less expensive than buying a new machine, and it avoids the time cost of learning new systems and converting existing files to a new machine. WestWind Computers usually has an advertisement in the *FOGHORN* showing current prices. Note that there has recently been a price reduction.

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TAXAN Monitor

by Jim Dunn

I use a TAXAN model KG-12N monitor with my Osborne 1 as an external monitor. The TAXAN has a composite video RCA type jack for input. The KG-12N has an amber 12" diagonal screen with 18 MHz bandwidth. The manufacturer indicates that the screen will display 25 lines with 80 characters each. The power switch, contrast and brightness controls are on the top in a recess for the built in carrying handle. The controls for vertical and horizontal hold are located on the lower left back panel. The molded plastic case is cream color.

Operation is simple. Just plug in the power cord and the supplied video cable, turn the power on and adjust the contrast and brightness to suit your eyes. The monitor that I have has problems handling the bandwidth of the Screen-Pac. The left-most and right-most characters in the 52 and 104 column mode are visibly distorted. By using the horizontal hold adjustment I can make either the left or right side look perfect at the expense of the opposite side characters. The 80 column mode looks great on this monitor. In the 80 column mode the Osborne generates 12 blank spaces at the left and right borders so the distortion is not seen.

Judging by the above results the TAXAN monitor has about 820 dots of horizontal resolution. However, the 52 and 104 column modes of the Osborne require at least 832 horizontal dots (8 x 10 matrix times 104 characters). The vertical resolution was acceptable so the monitor has in excess of 240 vertical lines. Upon close inspection of the characters on the screen a slight darkness is seen between each vertical line forming a character. There is no gap between horizontal dots so the overall effect is that each character is formed by horizontal stripes when at a close viewing distance. The TAXAN KG-12N is a good medium, almost a high resolution, monitor with a pleasing amber display. I use it for six to eight hours a day with WordStar in the 104 column mode and my eyes do not get tired. However if you need perfect left and right border characters in an external monitor you will probably need to get a monitor with 900 dots of horizontal resolution.

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Report of Two 2400 Baud Modems; Penril 2024 and USR Courier 2400

by Sigi Kluger

*** DISCLAIMER ***

The products described here were repeatedly tested for a specific application only. No value was placed on advanced features not directly related to their intended use. This review is about as unobjective as it can get.

In a data processing environment, chances are the employee with a terminal and a modem (or computer) and access to the business computer via dialup will be more productive and is more likely to put in a few hour's worth of unsolicited overtime per week than the employee who has access to the same computer only during working hours. Therefore, it was decided that the office computer be set up with at least one high-speed dialup line and the most economical choice was that of a 1200/2400 baud modem.

The modems were going to be used for two purposes:

1. unattended autoanswer
2. occasional use for dialout

Testing was started as soon as modems became available through a local distributor. Due to this factor only two brands were evaluated. Here is the story on both of them:

PENRIL 2024

The Penril 2024 seems to be the first widely available 1200/2400 baud modem, with the exception of the prohibitively priced VADIC 4400 series (currently used on Potpourri and OxGate Saratoga RCP/M systems.) The 2024's list price is somewhere around \$900.

The 2024 offers two baud rates, 1200 and 2400. The 1200 baud protocol can be switched from 212A to V.22 at configuration time. By today's standards, the 2024 cannot be considered a "smart" modem in that its smartness is limited to the ability to dial a phone number. Placing the modem in autoanswer mode is accomplished by simply configuring the internal and external switches according to the manual, releasing all front panel switches and plugging it in. The 2024 does not have a power switch (a definite plus in this application).

Originating a phone call with the 2024 is cumbersome, especially in an application where the modem may be 100 feet away from the terminal. First, the modem must be taken out of autoanswer mode by pressing a front panel switch. Next, the originate baud rate must be selected by locking the HI/LO switch IN or OUT. Note that if you set up the modem for 2400 baud, you can call a 1200 baud number because of the "fallback" feature, you just have to adjust your terminal baud rate after connect. The 2024 has no abort provisions. While dialing, the TALK/DATA switch can be used to abort. When connected, you must either cause the remote computer to drop carrier or you again have to hit the switch. An alternative is

dropping the DTR line low, but in some instances that's a bit hard to do. Dialing a phone number is very awkward. The sequence is "CRNnnnnnnnn<CR><LF>", so to dial 555-1212, you type CRN5551212~M~J. Fine, if the ENTER key on your keyboard generates a CR-LF sequence. With most terminals you have to hit two keys. Sorry, no redial capability.

The Penril worked fine calling the local TYMNET 2400 baud access number, but no connection was established to any long distance modem at 2400 baud.

The modem is superbly suited for unattended autoanswer mode. The 2024 can be turned on and left alone and if something goes wrong it's the software, not the modem. The continuous high-pitched noise coming out of the built-in speaker may be objectionable to some — it picks up the strongest local AM radio station. The speaker can be turned low or off via an internal jumper block.

One 2024 modem was tested initially in early November 1984, and two were again tested in late February 1985. No difference was found between the three modems, even though the early one may have been a preproduction unit.

USR COURIER 2400

The US Robotics Courier seems to be the first smart low-priced modem to be released, probably due to the fact that — unlike many manufacturers — it does not use the Rockwell chip set. It features Hayes 2400 compatibility, although its result code for 2400 baud is 11, while Hayes uses 10. I will briefly summarize the positive aspects of the modem:

- externally accessible, well-labeled configuration switches
- external switch to reverse pins 2 & 3, thus eliminating the need for a null modem cable
- result codes can be completely turned off via switch
- volume control for internal speaker

After setting the configuration switches (an easy task for anyone who has ever set up a modem) the Courier is ready for operation. With the appropriate switch setting, it can be used both in originate and answer mode without any hardware changes.

Originating a call can be accomplished with the now-famous ATDT sequence [Hayes command for "attention, dial, touch tone"] except that command letters don't have to be in caps. As with other smartmodems, any character typed while dialing or waiting for carrier aborts the action and hangs up the line. The "escape" character can be used to either return the modem to command mode (like the Hayes) or to hang up (like other USR modems) depending on a configuration switch setting.

The Courier was used to successfully connect to the local TYMNET number. A later model also was able to talk to a VADIC 2400V baud unit over long distance (Wayne Masters' RCP/M). The Courier was also able to call and be called by a Penril 2024 and another Courier.

As to autoanswer mode, the modem was a complete washout to put it mildly. Surely, hardware and software are partly to blame but the fact that other modems (including USR

Password and AD212A) work with the same setup indicates a serious flaw in the Courier.

The hardware used, for whatever reason, drops DTR while changing baud rates. The duration is so short that all other modems, tested with the same hardware, are totally unaffected. The Courier will, upon carrier lock and receipt of the first character typed, drop the carrier 3 out of 4 times at 1200 and 2400 baud. While no considerations were given to 300 baud performance, it was noted that those problems only exist at 1200 and 2400 baud. Placing a 5MFD capacitor from the DTR line to ground totally fixed this problem.

In autoanswer mode, the modems were used as follows:

- all result codes are inhibited
- on carrier loss, computer reboots, cycles DTR, then waits for a character typed by constantly polling the data input port
- on receipt of character, baud rate is tested and, if necessary, changed

I must again stress that this method works with all modems tested. The USR Courier, however, would simply refuse to answer anymore phone calls after answering a few. No set pattern was discovered. Sometimes, the modem would work properly for 5 to 10 calls then refuse to answer. At other times it would only allow 1 or 2 calls. When it refused to answer, no outside indication was given as to the problem. The appropriate LEDs on the front panel were lit, yet the modem did not respond to the ring. Surely, this is a most serious deficiency and I have decided that the Courier is unfit for use in this particular application. I am convinced the problem lies solely with the Courier, particularly since both the Auto Dial 212A and the Password 1200 work in the exact same environment (except for the much-needed 2400 capability, of course).

In closing I must again stress that the US Robotics Courier is certainly a superb modem and very well suited to originate applications. Considering that 99 out of 100 modems sold will never be used for pure autoanswer purposes, the Courier is not at all a failure.

One modem was tested in late November, two in late February (both were preproduction units) and three PRODUCTION units were tested in March. All five units exhibited the same problems.

May those who have the power to change things do so, may those whose toes I stepped on test for themselves before stepping on mine, may those who want to buy a Courier not be discouraged.

If YOU intend to use a USR Courier in an autoanswer-only environment, please by all means give it a try, it may sure work for you. If it doesn't, you have been warned, and if it does, either "they" fixed it or the problem is in the installation.

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Correction

In the March 1985 issue of the *FOGHORN* on page 64, there was an article titled *Operation of Hayes "SmartModem" from Osborne 1 "Modem" Receptacle* by Steve Meginniss. This article had a typo and should read like this:

II — Modification of Osborne 1

1. Remove front panel.
2. Connect jumper, 1-conductor, between pin #3 of the "serial RS-232" receptacle and pin #3 of the "modem" receptacle. [Pin locations — Looking at the front of Osborne 1 — Pin #3 of the "serial RS-232" receptacle is on the upper row, third from the right; pin #3 of the "modem" receptacle is on the upper row, third from the left.]

The words underlined were left out of the article.

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Corrections

There are two corrections here for the May 1985 issue of the *FOGHORN*. The article *New 2400 Baud Modems* by Wayne Masters (page 22) says 'continued on page 52' which should say 'continued on page 77'.

Another article called *WORD Plus from Oasis Systems: Just Another Dictionary?* by Paul B. Florance (page 31) says 'continued on page 77' which should say 'continued on page 52'.

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SOFTWARE REVIEWS

Review of Fancy Font, Version 2.1 by Ron Brown

If you're looking for a printer with the versatility of a dot matrix and the print quality of a formed character printer, read on.

My first experience with Fancy Font, by SoftCraft of Madison Wisconsin, came about 1 1/2 years ago, shortly after buying my Osborne 1. I couldn't afford a high quality, fast, letter quality printer, and the versatility of a dot matrix printer appealed to me, so I bought the Fancy Font program to go with my Gemini 10X and it's served me well. The print quality wasn't up to letter quality standards in that earlier version, but it was better than the standard "computer letter" type, and there was a good selection of fonts (typesyles) to choose from.

SoftCraft has just released version 2.1, which supports a number of printers including Epson and Gemini (I've been using the Olympia NP, an Epson clone), with much improved resolution and a wider variety of fonts, and it is TERRIFIC! Beautifully formed characters, proportional spacing, really fine looking results. The quality is, in my estimation, up to letter quality standards. Just in case I wasn't being critical enough, I showed some copy, done with Fancy Font, to a friend with a small printing and publishing business, and he was so impressed he's considering the program for use in his business!

The variety of fonts includes: Roman, Sans Serif, Old English, Classic, Tall, several graphics fonts for doing borders and special effects, a line drawing font (with poor documentation), and many more. What's more, they come in sizes from 6 points (point is a printers term for the size of a printed character, standard pica type is equivalent to 12 point type) to 72 points (we Osborne owners are limited to about 40 points due to limitations of CP/M). Many of the fonts are available in bold and italic in addition to the standard character set.

To use Fancy Font, you simply use your own favorite text editor (WordStar in my case) to create the file to be printed. During the editing process, you may embed various codes to change fonts, justify, center, position the printhead horizontally or vertically during printing, and a number of other commands to produce the document in the format you desire. SoftCraft has added some features to this version that make it much easier to use than the earlier versions; Word Wrap is one of these. In the earlier versions, line endings were difficult to estimate because of the difference in size of the fonts being used. Now, with Word Wrap, the computer does the work of figuring out the line endings for you. When the completed file

is ready to be printed, Fancy Font is invoked at the A> prompt, and the filename, fonts to be used, and other formatting commands not embedded in the document can be specified at this time. The control over the printed document is impressive, with a large number of well-documented commands at your disposal.

In addition to the above mentioned capabilities, the program comes with two additional programs: Efont, for editing fonts from the Hershey Character Database to suit your individual needs, and Cfont, which allows you to create your own fonts or logos. These programs are well documented, fairly easy to learn, and very powerful in application. SoftCraft has a tutorial disk available to make learning these creative programs even easier.

The high resolution of the characters is done by making a number of passes over the line of print, incrementing the paper vertically in very small increments between passes. Herein lies the price you pay for the high quality of the printed page: that fast dot matrix printer takes a lot of time to make all those passes! The loss of speed is a small price to pay for the excellent quality of the results, however, and when speed is called for, you can still invoke the standard printer fonts and rip out a page in a hurry. Another place where the pace slows down is when you use more fonts in a document than there is room for in memory (up to 10 fonts in a single document are possible). When a font must be called from the disk, rather than memory, the pace is terribly slow. I've overcome that objection by using a RAM disk from WestWind Computer (Drive C:) to speed things up, with the RAM disk there is no noticeable hesitation while waiting for the input from disk.

The basic Fancy Font program is available direct from SoftCraft, 222 State Street, Madison WI 53703 for \$180. It comes with a few of the popular correspondence fonts, and additional fonts are available for \$15 per disk (the number of fonts on a disk varies from one to several). The documentation is excellent, the best I've seen with any program, and the support is very good. Actually, the documentation is so good that help is seldom necessary. Upgrades are available for a very reasonable \$25 and SoftCraft sends out a newsletter to registered owners with information on new fonts, upgrades, previews of upcoming additions, and handy hints on using the program.

It's difficult to do justice to a review of this program without being able to actually show you the results, but believe me, it does a fine job. If you are looking for professional results, a high degree of control over your printer, or just want something nicer than "computer type" for your personal correspondence, take a look at Fancy Font. I think you'll love it!

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Academic Writing With WordStar With a Little Help From Footnote, Bibliography and Notebook

by Jim Spickard

I originally bought my Kaypro to write my dissertation, and have since used it to ensure that I publish rather than perish.

But software has been a problem. Academic writing calls for footnotes, endnotes, and bibliographies that are complex — and beyond the capabilities of many word processors.

Since WordStar was bundled with many Kaypros, and since it is so user friendly, many of us would like to be able to use it for our academic writing. WordStar's screen-oriented features — like the page display, which is crucial for academic work — are very nice. But factory-fresh WordStar can't give academic writers the footnote and reference formatting features they need.

Since I bought my Kaypro to avoid drudgery, I began to look for software which would make my work easier. I soon found that most computer dealers and most magazines were useless. They didn't know beans about academic work. They're oriented toward business, where the big money is. So no company has developed the ideal product for our purposes. That's the bad news.

The good news is that after much work — and luck — I came up with a package of programs that do most of what an academic writer needs.

The best news is that it's possible to do it all on the Kaypro with WordStar. Pro/Tem Software's Footnote, Bibliography and Notebook compromise this do-it-yourself academic writing package.

Pro/Tem's Footnote

Footnoting is the sine qua non of academic writing. Footnote, by Pro/Tem Software, numbers and formats footnotes in WordStar text files. It also allows you to pull them out of the file or put them back in at will.

Footnote lets you enter a note by placing a "notecall" symbol @ in the text, and then typing in the note anywhere thereafter (though placing them at the end of the paragraph works best for me.) You separate the footnote from the text by placing a ^PR at the note's beginning and a .pa (page break) at its end.

As Footnote runs, it replaces the @s with sequential numbers, superscripting them if you desire. It then moves the notes to the bottom of the proper page. The ^PR at the beginning of the note causes the conventional ruler line to be inserted, separating the footnote from the text.

Long notes overflow to the footnote area at the bottom of the next page. Even if you write in the German style of extended footnotes, Footnote will format them so that they continue for pages. Text will appear at the top of the next page the notes haven't filled. On the other hand, you can direct that footnotes not be split between pages. In this mode, notes which are too

long to fit on a given page will be bumped to the next page in their entirety.

Footnote can also remove the notes and place them in a separate file. This is useful when your publisher requires notes at the end of the text rather than at the foot of the page. It also greatly aids checking the consistency of your footnotes because it lets you see them all at a glance.

If you change your mind about the format, or you're done with your consistency check, Footnote will reinsert the notes at all the right places in your text file. This ability to switch between endnotes and footnotes is an academic writer's dream.

Of course more notes can be added at any time. You just have to make sure that they appear in the proper order relative to the notecalls. Footnote will renumber the notes sequentially, and let you know when calls don't match notes or when other problems exist.

Footnote will also allow you to set new default options, so that the @ can be replaced by any other character. The command ^PR can also be changed, if you're currently using it for something else. (I use ^PR to change the character pitch on my Okidata printer, for example.) You can even choose different numbering styles.

There are, however, some things to watch out for. If you have illustrations or headings in your text, you will want to use WordStar's conditional page breaks (.cp) to avoid splitting the illustrations in half, or putting the heading on the last line of a page. However, when using Footnote, you must change the .cp to ...cp and .pa to ..pa, to distinguish them from WordStar's commands. If you are careful at this, the page breaks will occur where you want them.

There are several minor problems with using Footnote. First, when working on a double spaced text, Footnote leaves an extra space where the note was removed to the footnote field. It's easy to delete it, but I'm not clear why it happens. I simply review and correct the text before printing. Also troubling, is how careful you must be to follow all of Footnote's formatting conventions. As with any new software that is doing lots for you, you will, with practice, be able to surmount this.

Footnote comes with PAIR, a handy utility that checks to see that WordStar's underlining, boldface, and doublestrike commands end as well as begin. This helps you avoid the shock of returning to your printer only to see that it has spent the last forty minutes underlining your entire manuscript. PAIR will also check for paired parentheses, quotation marks, and any other character you specify.

Overall, Footnote provides the flexibility academic writers need, at a very reasonable price.

Bibliography

After footnoting, making reference lists is the next major hurdle for academic writers.

Every journal has its own preferred style for citations. These range from the short form common in the sciences (e.g., Rabbitt 1984) to the complete style prevalent in the humanities (e.g., Rabbitt, Brer. "How to Eat a Carrot". *Journal of Gus-*

tatory *Investigations* XVIII: 734-795, 1984). Not only is typing them a pain and a constant source of typos, but shifting from one format to another for resubmission can require lots of busy-work.

Fortunately Pro/Tem offers help here too. Bibliography maintains a disk library of references that frees you from typing and retyping the same information.

In the text you type only a keyword. Bibliography keeps track of the words you cite, constructs your references list, and prints the citations in your text in whatever form you specify.

In my case, Bibliography keeps references for over 700 works on file, with author, title, publisher, date, annotations and so on. When I write an article, I place my keywords in the text surrounded by %-signs (%Rabbitt 1984%). Bibliography compiles a list of these keywords, and then pulls the full references — alphabetized — into a separate file. This becomes my bibliography. If I'm writing for a scientific journal, I stop there (after removing the %-signs with WordStar's Find & Replace feature). For publications which require a different format, I have Bibliography replace each keyword with its full citation. I then remove the %s as I reformat. (Since the full citation takes up more space than the keyword, you can't avoid reformatting.)

Before doing the above, it is best to save a copy of the text with the original %'s and keywords in place. Since Bibliography can only work in one direction — from keyword to full citation — you would need this copy to produce a version with the shorter citations.

If one is writing a book, the process is a little different. Most authors write by chapters, as handling more than 20-30 pages in one text file is cumbersome. This usually means there is a separate bibliography for each chapter. MERGEBIB, a utility included with Bibliography, will merge and alphabetize up to three bibliographies. Bibliography can run with word processors other than WordStar. Indeed, it should work just fine with Perfect Writer.

With a little ingenuity, Bibliography can be even more useful. The key is manipulating its disk library whose standard format is:

%Key:

%Author:

%Title:

%Publisher:

%Date:

%Annot:

You may use as many fields as you want, and name them however you like. The only stipulation is the keyword must come first and the annotation last.

When you print the full citation, you may exclude the keyword, the annotation and one other field of your choice. The headings do not appear, and each field is followed by a period, as academic usage requires.

Bibliography will print a list of your keywords, so you can keep track of them. With a little effort you can print out keyword, author and title so you distinguish the works of more

prolific writers, e.g., %Rabbitt 1984%, %Rabbitt 1984a% and %Rabbitt 1984b%. (From a name like Rabbitt, what did you expect?)

Unfortunately, all those headings must be entered each time a record is added. This gets tedious, though Pro/Tem suggests ways to make it easier (such as putting the headings in a separate file to read in using WordStar's ^KR.)

And the bibliographic fields may only be printed in one order — a hassle when some journals require the date second. Most require it be last, and switching between the two means a lot of retyping.

Also, you must print all your fields (other than %Key, %Annot and one other of your choosing). But I like to include in the file, where I found a book (e.g., the Santa Cruz, Stanford or even a friend's library) without having to print it out. Indeed, most publishers would just as soon as such information not end up in my citations.

These are problems a good text-oriented database manager called Notebook can solve.

Notebook

Notebook is a database management system especially designed for storing and retrieving text. It can be used for everything from personal files and mailing lists to medical records and research notes. But unlike many database systems, it is easy to use. It can be used to store the library needed by Bibliography. Even better, its flexibility corrects the latter's faults.

Each book or article has its own record. Each record holds up to twenty fields (author, title, etc.) and new fields can be added at any time without losing current data.

Unlike Perfect Filer, Bibliography does not make you specify the number of characters you expect in each field. The field lengths expand as you use them, and can vary across records. Your only constraints in the CP/M-80 version, are that each record can't exceed 4000 characters, and each field must contain no more than 500 characters (about 9 lines of text).

Field headings are easy to enter. Data prepared for Bibliography may be read into Notebook files, as can dBASE II files in "delimited" format. It is wonderful not to have to retype records when switching to Notebook.

Best of all, since Notebook's commands are similar to WordStar's, there's less to learn.

Notebook's reports are its most valuable feature. The program has an on-screen report editor that makes new report formats child's play. Since they take only minutes to produce, I can afford to tailor my printing to specific jobs.

When I'm finished with a manuscript, I choose the reference fields I want, then write them to disk in the form Bibliography reads. You can place the date second or last, depending on the desired reference format.

After running Bibliography, you can reformat the resulting file with WordStar. (Here I sometimes use Perfect Writer, because its reverse indentation looks so good in reference lists.)

Notebook is a good addition to the academic writing package. But it has one problem: it's s-l-o-w. Notebook works by reading a record from disk, processing it, writing it back out



and moving to the next record. This means a lot of disk activity, and too much time spent staring at the screen (or taking walks or tea-breaks).

Writing my entire library in Bibliography's format takes at least ten minutes. A search or sort seems to take forever.

This is fine if you aren't in a hurry. But Notebook is not where you want to put anything you need to retrieve quickly.

How WordStar Alone Can Help

I write with WordStar now because Footnote is made to modify WordStar files. Admittedly, WordStar is not perfect. It's not nearly as flexible as word processors such as Perfect Writer, Mince and The Final Word. It won't yank back erasures, for example. It won't do windows. And WordStar can make reformatting from, say, a 65 to a 60 column line, extremely time-consuming.

Fortunately there are ways to make WordStar even nicer than it was when it came packed with your computer.

First you have to really get to know the program. You'll discover, for example, ^QQ^B will rapidly reformat your text, but only if the hyphen-help toggle is turned OFF — something the manual doesn't tell you. You'll also find that ^OT gets rid of the ruler line, so that you can display a full 22 lines of text; or that ^QP zips you back to where you were before you did a ^KS save.

These things are in the manual, but they are easy to miss. Julie Anne Arca's *Practical WordStar Uses* is a good guide on such matters (and there are others).

You can also customize your WordStar so that it comes up every time with margins, toggles, and other goodies set just the way you like them. For example, many complain that it takes too long to adjust the WordStar toggles when starting to edit. Margins and tabs have to be adjusted, the insert and justification toggles turned on or off, the help level changed, etc. Your favorites for these options and others can be permanently embedded in your version of WS.COM by changing the default settings with either of WordStar's installation programs — WINSTALL.COM for Version 3.3, and INSTALL.COM for Version 3.0 — or with DDT, CP/M's Dynamic Debugging Tool. INSTALL.COM requires that you know either WordStar's label for each desired patch point (e.g., ITHelp for the initial help level), or the hexadecimal value for its location (e.g., 0360). With DDT, you're forced to use the hex values only.

Since the INSTALL and DDT approaches are complicated enough to be the subject of a second entire article, I will focus here on the much more user-friendly procedures for using WINSTALL. First, before typing any changes on WS.COM, be certain to have a backup copy of it on a disk that's not in your machine.

To enter the installation program, start at the A> prompt and type in WINSTALL ↵. When you reach the screen which asks "Name of file to install or <RETURN> for A:WSU.COM," you should enter WS.COM as the name of file. (Kaypro does not distribute WSU.COM with its WordStar as a part of their contract with MicroPro.) From the main installation menu of WINSTALL, select the Menu of WordStar Features. Selecting A at the features menu allows you to set the

default help level to 2, and have a full screen to work with while editing. F turns justifications OFF while K and L reset the left and right margins.

I and J control the top and bottom margins, so you can correct your printer's paper-feeding idiosyncrasies without having to put dot commands in your text. If you have two printers as I do, this will save rewriting as you switch from one to the other.

Unfortunately WINSTALL can't get rid of the 20-second MicroPro commercial you have to look at every time you load the program. Using DDT at the location of WordStar's aptly named "long delay," however, will do the trick (for version 3.0, change location 2D2 to 01; for version 3.3 do the same to location 2B2).

Looking back

Overall, the WordStar + Footnote + Bibliography + Notebook package is the best I've found for academic work. There are other footnoting programs. And there are some fancier — and more expensive — word processors running on the IBM and compatibles.

But none of them beat the Kaypro's simplicity (and price!). As long as WordStar comes in Kaypro's software bundle, the combination I've described here will be hard to top.

Product Summary:

Footnote: \$99

Numbers and formats footnotes and endnotes in WordStar files. Extremely flexible for academics.

Bibliography: \$99

Constructs reference lists from citations in texts. Also places full or truncated citations in text.

Notebook: \$150

Text-oriented database manager. Extremely useful for adding flexibility to Bibliography. Easy to use. [Editor's Note: Notebook is not available for the Osborne 1. It is available for later Osborne computers.]

These are designed to run on CP/M, CP/M-86 and MS-DOS computers, and all are products of:

Pro/Tem Software
2363 Boulevard Circle, Suite 6
Walnut Creek, CA 94595
Telephone: (800) 826-2222

Jim Spickard is a writer and teacher with a PhD in the Sociology of Religion. He is also research director of the Cultural Development Institute, Aromas, California.

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Finally, you can take full advantage of your Exec and CP/M 3 with two exciting new products ...
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So, how does the INOVA 500 RAMdisk compare with that prehistoric relic known as "Drive C"?

PROBLEMS:

Drive C ties up your (one and only) disk pocket and clutters up the front of your machine with cables and plugs. (Let's face it, it's not a very attractive addition to your computer.) Drive C does not run at the fastest possible speed, since it communicates through the parallel port. And, Drive C is too bloody expensive!

SOLUTIONS:

- o The INOVA 500 RAMdisk fits ENTIRELY INSIDE your Executive. The INOVA 500 RAMdisk replaces your existing memory board, and it just plugs in. No soldering is required. Just change the memory board and—in 10 minutes—the INOVA 500 RAMdisk and you are up and running!
- o The INOVA 500 RAMdisk is COMPLETELY transparent, and faster than Drive C, since it communicates directly through the memory bus; the INOVA 500 RAMdisk is essentially additional banks of memory, for which CP/M 3 is designed!
- o The INOVA 500 RAMdisk with faster, better performance, clean installation, SKEYS software (see below) and one full year of free software upgrades costs just:

\$345.00 with trade-in of your present memory board, \$395.00 without trade-in

(Microtech will install the INOVA 500 RAMdisk for FREE!)

* Drive C is a trademark of Westwind Computer.

Also, we are pleased to announce -- SKEYS -- for the Executive; the Software Wonder from INOVA, a remarkable memory-resident program which gives you INSTANT access to a host of incredible features at the touch of two or three keys. Some of SKEYS' impressive features (available at any time within any program, while using no user TPA memory):

- o SKEYS allows you to change arrow and function keys or call up any of 4 additional sets (even within other programs)!
- o SKEYS adds 22 more redefinable, programmable function keys, EACH of which can have up to 255 characters, PLUS a comment, and can call other function keys in turn! Just think of the many computing/printing/modeming chores that you will be able to automate! (Trig functions, for instance, can be programmed.) These definable keys can also be used for taking quick notes! You don't need a separate key definition program!
- o SKEYS has TWO calculators, a programmer's hex/decimal/binary/octal mode, and a standard "business" calculator, with 2 memories and a "paper tape" display! SKEYS will emulate any calculator you've ever owned (even Reverse Polish)! And, the results of calculations can be output at the cursor position at any time from within any program! (Great for spreadsheets and word processing!)
- o SKEYS provides a true "print screen" command and cursor type/keyclick change!
- o SKEYS offers a memory-typewriter mode for typing envelopes or quick notes without having to exit your current program!
- o SKEYS includes a real-time memory editor in decimal, hex, binary, octal, or ASCII, including all banks of CP/M 3 and the video RAM! (Great for hacking!)
- o SKEYS contains a "grab" function, which can snag any line from anywhere on the screen and store it for "playback" later! (Great for repeating those long command strings!)
- o SKEYS has all these stunning features and MUCH MORE, including an on-line command summary for help!

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Notes on the Use of 2500AD Z80 Assembler

by Bob Bradley

I recently purchased the 2500AD Z80 Macro-Assembler, version 3.01, (from 2500AD SOFTWARE, P.O. Box 441410, Aurora, Colorado 80014) and not having used a macro assembler before have had the occasion to experience the joy of finding out what will and what won't work. Most of my experience so far has been with conversion of existing routines to operate with Z80 coding.

In general so far, I am satisfied with ASM80 and the included conversion programs and linkers. I bought it primarily to have a Z80 assembler, and feel that for the price \$49.50 plus shipping (\$6.50, although they overcharged me \$3.00 when I sent them a credit card number) it has a lot of capacity. I am discovering how to use its many advantages; more than I thought I would.

I have some notes on using coding, which was suitable for other Assemblers, but creates syntax and other errors with ASM80. I am including these below to save you from some of the problems.

In no particular order, they are:

1. The assembler arrives named ASM.COM and that is, of course, the same name as the Digital Research Assembler which comes with CP/M. I promptly renamed the 2500AD assembler to ASM80.COM which is the name that I will refer to in these notes. I also commenced using .A80 as the filetype for the assembly which is designed to run on the ASM80.
2. My first problem in running a test program was that the program did not end with a space (or tab), "END", $\hookrightarrow$. YOU MUST HAVE AN END TO ALL PROGRAMS with a CARRIAGE RETURN ($\hookrightarrow$) after the end and the "END" cannot be the first character on the line.
3. ASM80 is very unforgiving about stray spaces in the coding. The code "LD A, (HL)" is interpreted as "LD A," and "TRUE EQU NOT FALSE" is interpreted as "TRUE EQU NOT". Both will return a syntax errors on assembly unless written as "LD A,(HL)" and "TRUE EQU.NOT.FALSE". For existing programs, use a global search and replace; ", " [comma space] with "," and possibly ",^I" with "," to remove any tabs which may have gotten in between. That will eliminate the first problem. The second problem is perhaps best found by a trial assembly.
4. ASM80 will not accept intermixed coding of Z80 & 8080 proceeded by .Z80 or .8080 as the M80 assembler will. You must break out the 8080 coding and separately convert it (using CONV.COM included with the ASM80) and then insert it in place of the 8080 coding. If you try and convert Z80 coding using CONV, you will end up with lots of errors. ASM80 interprets all characters, including the "\$" non counted symbol, acceptable in ASM.COM (Digitals). Therefore, ASM80 (under assembly) distinguishes between

LD\$FCB\$NEW and LD\$FCBEW while ASM would treat both in the same manner.

6. ASM80 does not recognize the "!" as the start of another line. Therefore PUSH AF!PUSH BC!PUSH DE!PUSH HL is intercepted only as PUSH AF. This is a problem especially if you have programs converted from 8080, where this is allowed. Unless you change the program to conversion, a global replace cannot be as easily used to change 8080 syntax with Z80 and this type of error can occur many times throughout the program. Recommended procedure: BEFORE CONVERSION globally replace all "!" with $\hookrightarrow$! (carriage return TAB) and then convert.
7. ASM80 will not accept the psuedo op DEFM, but it is easily replaced with DEFB or .STRING.
8. In addition to .Z80 and .8080 other coding that I have found not accepted includes "DEPHASE", "PHASE", and "CSEG" also from code for the much more expensive M80 assembler.

X.COM and /.COM

Documentation

by Charles Bailey

X.COM is a (2K) replacement for XDIR. It is found on FOG/UTL.032.

It works just like XDIR except that it prints 3-across labels. These labels show the size of each file, space used and space remaining. The three across format is handy for flippies. You can now print the directories for both sides of a disk on a single piece of paper that fits conveniently into a disk jacket.

Other advantages of X.COM are that it requires less storage space on your system disk, and its shorter name uses up less space on your SETUP (or MANYKEY) special function keys.

Another feature of this program is that you can use it to store disk directories onto disk. For example:

X B: U#032 $\hookrightarrow$

will create a disk directory for the disk in the B drive and store it on the A drive giving it the name U#032.DIR. If you wish, you can put many .DIR files on a single disk and then combine them into a single file using the WordStar ^KR command.

When you switch disks, you will still need to hit ^C before running X B: (just as you did with XDIR), in order to get up-dated data for space used and space remaining.

/.COM (1K) substitute for SUBMIT.COM. It is found on FOG/UTL.031 & .032. It is handy if you have command strings that you use repeatedly.

An example of the use of this command would be:

/ FAST:DATTIM;SC2 $\hookrightarrow$

The above example command string can be entered directly from the console or stored on a SETUP (or MANYKEY) special function key.

When invoked, the above command line will create a .SUB file containing the program names you specified and then

automatically run this .SUB file (using /.COM instead of SUBMIT.COM).

In the above example, the command line will execute your version of FAST.COM and then immediately move on to execute DATTIM.COM. Since the DATTIM program expects you to respond to its prompts for date and time, the machine will pause to allow you to supply these inputs. When you've entered the last required input, the machine will automatically resume and execute the next program, in this case SC2.

If you insert NSWP205 B: into the above command string, the operation of /.COM will be similar. The machine will execute NSWP205 and recognize the B: parameter. Then it will allow you to do all the things you want to do with NSWP205, until you hit X to exit NSWP205, at which time it will automatically resume with the next command in your command line.

The function of the /.COM program is the same as the SUBMIT.COM except that it does not appear to have the ability to use XSUB.COM for the purpose of automatically supplying user responses to program prompts.

The principle advantage of /.COM over SUBMIT.COM is that it is easier to use. It does not require you to manually create and edit your own .SUB files. It also requires less storage space on your system disk if you can live without the XSUB capability.

If you desire, the operation of /.COM can be interrupted by ^S or aborted by ^C.

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ManyKey

by Charles Bailey

Recommendation

Highly recommended for SC2

Also recommended for WordStar

Benefits

Saves time (Improves productivity of available time).

Simplifies use of SC2.

Allows WordStar setup of print control functions and other desired setup functions.

Features

Expands usefulness of set up keys by allowing you to:

- Specify as many sets of ten set up keys as you wish.
- Change set up keys quickly and easily.
- Store customized set up keys on each data disk as separate 1K .COM files.
- Retain the usefulness of booted setup keys (via a RESET command).
- Print copies of current set up keys for storage in disk jackets.
- Retain the maximum size of your SC2 spreadsheets.

Applications

(examples of tasks that can be assigned to the keys)

SC2 (std)

load filename, save file last loaded, print file, load SC2 column format, format cell for text left

SETUP, CHNGKEYS B:, NSWP205 B:, XDIR B:



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SC2 (Xecute) Load Xecute filename, save it, output it to disk, load SC2 Xecute your updated execute file, (not used)
 SETUP, CHNGKEYS B:, NSWP205 B:, XDIR B:

WS load full set of printer control characters (proportional, pica, elite, compressed, wide on, wide off, double strike on, double strike off)
 Run A:KP from WS R(un) command

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 Severn, MD 21144
 (301) 969-5603

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SmartKey by Charles Bailey

Recommendation

Useful for users of:

- FOG General Ledger system, who use SPOOL/UNSPPOOL and who want to use WordStar to edit reports before printing.
- WordStar users whose needs cannot be met with ManyKey or MailMerge.

NOT desirable for SC2. Its use decreases the maximum spreadsheet from 24K to 18K.

Benefits

- Saves time (improves productivity of available time).
- Simplifies operation of canned programs.
- Provides an alternative way of inserting standard sentences, clauses, letterheads. (WordStar's MailMerge also provides these functions.)

Features

- Permits the use of very long, complex command strings on setup keys.
- Allows one to program stop/restart pauses in command strings.
- Setup keys are WordStar editable. This eliminates the need to retype the whole string every time you want to change it.
- Allows definition of up to 90 active setup keys in addition to the ten defined either by SETUP or ManyKey.
- Allows 250 characters to be put onto your setup keys. This can be increased to a maximum of 3250 characters.
- Allows use of control characters in setup keys.

Draw Backs

- Keys are stored in machine's Temporary Program Area. This reduces the maximum size of your SC2 spreadsheets.
- Procedure for modifying setup keys is more complicated and time consuming than ManyKey.
- Double density and single density machines require different keystrokes for some commands. e.g. The RESUME

command is issued by ↵ (return) on my double density machine and by a | on my single density machine.

Applications (example)

General Ledger
 Envoke SPOOL/UNSPPOOL.
 Envoke G/L000 PASS.
 Envoke WordStar to view and edit reports for printing.
 Modify SmartKey definitions.

COST \$129.95

SUPPLIER Software Research Technologies, Inc.
 3757 Wiltshire Blvd., Suite 211
 Los Angeles, CA 90010
 (213) 384-5430

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Spreading the New Word

by Herb Golden, copyright © 1985

Prompted by the rumors that MicroPro will abandon the eight-bit market for all future WordStar updates, I recently purchased a copy of the word-processing program, "NewWord" by NewStar Software Inc. The cost for Osborne owners is only \$100.00. That was what grabbed me. And the little goodies that improve it over my WordStar version 2.26 held me. I ordered it factory direct.

It is marked version 2.07 and seems the equivalent of WordStar 3.3 in features. NewStar configured it specifically for my Osborne (Factory Double Density, Nuevo 80 column upgrade) but they tell me that they also configure for 52 column without any trouble.

NewWord is essentially a WordStar clone and I do not mean that as a negative. I mean that if you know how to run WordStar, you know how to run NewWord. And, NewWord is totally compatible with all existing WordStar files.

Briefly, NewWord is a pleasure to use. It prints text on the screen at half-intensity and shows underlining, boldface, and the like on the screen at full-intensity. It includes micro-justification, page seek, column blocks, document protection, multiple header and footer lines, an unerase command for characters, words, sentences, blocks, and the potential for much more. It has everything I always missed on my WordStar.

Modifications are accomplished quickly and easily through a series of patch menus. No more hunting for address locations, hex codes, and DDT — unless you want to. Great for a non-technical user like me but perhaps disappointing for the hackers in the audience. The folks at NewSoft tell me there is no direct user access to the address area other than through the patch menus. But there are four patch menus and they are quite extensive. I have my copy modified so that it comes up logged on the B drive, with justification off, help level 1, hyphen-help off, directories suppressed, all delays cut to zero, for starters — and configured for my Epson MX-80 so that I can implement enhanced, double-width, italics, compressed, sub and superscript fonts from within the program. Or, if you

cont. on page 43

CALENDAR

Under this heading you will find the listing of activities and events of Affiliated Member Organizations. Listings are the responsibility of the groups' officers. Officers must have corrections into FOG office by the first of the month prior to publication (December 1st for the January issue). For a list of other groups, see **"CONTACTS"** in back issues starting January, 1983, or send a stamped, self-addressed envelope to the FOG offices. Please include a note with your geographical area. To verify the meeting date, time, or location, call the number in the right hand column.

Date	City	A.M.O.	Day	Time	Meeting Address	Contact No.
Jun 17	Soldotna, AK	18-PenFOG	3 rd M	7:00pm	Totem Realty, 44669 Sterling Highway	907-262-5801
Jun 17	Anchorage, AK	63-GLOB	3 rd M	7:00pm	Wendler Jr. High School, Room 133, 2905 Lake Otis Parkway	907-276-6484
Jul 11	Sitka, AK	83-BUG	2 nd Th	7:30pm	Human Services Center, 207 Moller Dr.	907-747-5372
Jul 14	Ketchikan, AK	89-KCPM	2 nd Su	4:00pm	320 Bawden Suite 101	907-225-6476
Jun 29	Homewood, AL	49-FAOUG	last Sa	11:00am	Homewood Public Library, 1755 Oxmoor Road	205-942-3706
Jul 4	Huntsville, AL	125-NAOUG	1 st Th	7:00pm	Madison County Court House, Jury Venire Rm	205-881-0377
Jul 11	Ft. Smith, AR	23-AFOG	2 nd Th	7:00pm	Lewis Paint and Supply, 4900 Wheeler Avenue	501-785-0820
Jul 2	Tempe, AZ	100-TOG	1 st Tu	6:30pm	Tempe Public Library, Pyle Adult Center, Southern Ave at Rural Rd	602-438-2731
Jul 3	Stockton, CA	11-SOG	1 st W	7:00pm	Allen's Computerland 4343 Pacific Ave.	209-951-4701
Jul 8	Fresno, CA	35-FROG	2 nd M	7:00pm	1434 West Shaw, Suite A	209-683-2252
Jun 19	Long Beach, CA	130-OPEN	3 rd W	6:30pm	C.S.U., Learning Assistance Center	213-498-4186 x 5350
Jul 4	Palo Alto, CA	1-1 st FOG SV	1 st Th	7:30pm	Ford Aerospace, 3939 Fabian Way	408-371-8699
Jul 12	Castroville, CA	5-MBAOCUG	2 nd F	7:00pm	Castroville Fire Station, Rec Room, Speegle & Pomber	408-449-4021
Jun 27	San Francisco, CA	2-SFCS	4 th Th	7:00pm	St. Aidan's Church, Goldmine & Diamond Hgts.	415-239-1399
Jul 10	Oakland, CA	3-East Bay FOG	2 nd W	6:00pm	B & B Electric, 2832 Ford Street	415-272-9099
Jul 9	San Rafael, CA	31-MOG	2 nd Tu	7:00pm	San Rafael High School, 2nd Street	415-897-0629
Jun 19	Walnut Creek, CA	60-MTDOG	3 rd W	7:00pm	SF Federal, 1660 Olympic Blvd, Diablo Rm	415-933-2665
Jul 1	Menlo Park, CA	68-SMOG ³	1 st M	7:30pm	Crane Place, 1331 Crane	415-325-2442
Jun 17	Menlo Park, CA	68-SMOG ³	3 rd M	7:30pm	Crane Place, 1331 Crane	415-325-2442
Jul 8	29 Palms, CA	114-HOG	2 nd M	6:00pm	CONFIRM	619-367-9783
Jun 19	Arcata, CA	29-HOG	3 rd W	7:15pm	Humboldt State Univ., Science Bldg., Rm 126	707-445-2074
Jul 4	Santa Rosa, CA	56-No. Bay FOG	1 st Th	7:00pm	Valley Oak Park Rec Hall, 2600 Northcoast St.	707-546-0145
Jul 2	Santa Maria, CA	42-SMOG	1 st Tu	7:00pm	325 Poppinga Way	805-937-1128
Jul 11	San Luis Obispo, CA	47-CCOG	2 nd Th	7:00pm	TRW, 1050 Southwood Drive	805-544-4267
Jun 25	Santa Barbara, CA	69-OSBUG	last Tu	7:30pm	SB Planning Rm, 105 E. Anapamu St	805-687-8541
Call	Sierra Madre, CA	66-SMOG	????		By arrangement only — CONFIRM	818-355-8825
Jul 12	Chatsworth, CA	86-ONUG	2 nd F	7:00pm	20630 Lassen Street	818-709-6202
Jul 11	Northridge, CA	106-TUG-NET	2 nd Th	7:00pm	Valley Federal Savings, 9055 Reseda Blvd.	818-994-6567
Jun 24	Sherman Oaks, CA	106-TUG-NET	4 th M	7:00pm	Central Savings, 4464 Van Nuys Blvd.	818-994-6567
Jul 3	El Monte, CA	113-El Monte	each W	5:00pm	Chadwick-Helmuth 4601 N. Arden Drive	818-575-6161
Jul 10	El Monte, CA	113-El Monte	each W	5:00pm	Chadwick-Helmuth 4601 N. Arden Drive	818-575-6161
Jun 19	El Monte, CA	113-El Monte	each W	5:00pm	Chadwick-Helmuth 4601 N. Arden Drive	818-575-6161
Jun 26	El Monte, CA	113-El Monte	each W	5:00pm	Chadwick-Helmuth 4601 N. Arden Drive	818-575-6161
Jul 11	Davis, CA	6-DOG	2 nd Th	7:00pm	PG&E Warehouse Classroom L Street	916-756-2967
Jul 3	Sacramento, CA	61-SOG	1 st W	7:00pm	SMUD Utility Bldg, 1708 59 th St	916-487-3277
Jul 4	Denver, CO	4-DOG	1 st Th	7:00pm	Clements Comm. Center 2 nd Floor 1580 Yarrow	303-623-3119
Jul 9	Boulder, CO	65-BUG	2 nd Tu	7:00pm	Colorado Univ. Business School, Rm 101	303-451-0456
Jun 19	Ft. Collins, CO	115-FTCOG	3 rd W	7:30pm	C.S.U. Ind. Sciences Computer Lab, 200 W. Laurel, Rm 200	303-226-4156
Jul 3	Colorado Springs, CO	133-CSOG	each W	7:00pm	Hewlett Packard, Garden of the Gods, Spruce Rm	303-473-7647
Jul 10	Colorado Springs, CO	133-CSOG	each W	7:00pm	Hewlett Packard, Garden of the Gods, Spruce Rm	303-473-7647
Jun 19	Colorado Springs, CO	133-CSOG	each W	7:00pm	Hewlett Packard, Garden of the Gods, Spruce Rm	303-473-7647

Continued next page

Date	City	A.M.O.	Day	Time	Meeting Address	Contact No.
Jun 26	Colorado Springs, CO	133-CSOG	each W	7:00pm	Hewlett Packard, Garden of the Gods, Spruce Rm	303-473-7647
Jul 13	Colorado Springs, CO	133-CSOG	2 nd Sa	1:00pm	Pikes Peak Community College Cafeteria	303-473-7647
Jul 10	Danbury, CT	40-DOG	2 nd W	7:00pm	Preferred Utilities Mfg, 11 South St	203-792-7959
Jun 26	Danbury, CT	40-DOG	4 th W	7:00pm	Preferred Utilities Mfg, 11 South St	203-792-7959
Jul 4	Orlando, FL	16-GOUG	each Th	7:30pm	Gard Micro Systems, 7525 Currency Drive	305-847-7031
Jul 10	Orlando, FL	16-GOUG	each Th	7:30pm	Gard Micro Systems, 7525 Currency Road	305-847-7031
Jun 20	Orlando, FL	16-GOUG	each Th	7:30pm	Gard Micro Systems, 7525 Currency Road	305-847-7031
Jun 27	Orlando, FL	16-GOUG	each Th	7:30pm	Gard Micro Systems, 7525 Currency Road	305-847-7031
Jul 4	Maitland, FL	20-CFLOG	1 st Th	7:30pm	Lake Faith Villas Club Room, Maitland Blvd	904-728-1711
Jun 13	Maitland, FL	20-CFLOG	3 rd Th	7:30pm	Lake Faith Villas Club Room, Maitland Blvd	904-728-1711
Jul 14	Miami, FL	26-GCOUG	2 nd Su	1:30pm	F.I.U Tamiami Campus, Building DM, Room 100	305-251-7666
Jul 11	Ft. Lauderdale, FL	91-FLOG	2 nd Th	7:00pm	Harris Comp Sys, 2101 W. Cypress Creek	305-748-7237
Jul 10	Jacksonville, FL	98-JOUG	2 nd W	7:00pm	JEA Bldg, 233 W. Duval Street	904-633-4920
Jul 1	Athens, GA	81-CP/M Athens	1 st M	7:00pm	Athens Microcomputer Center, W. Broad Street	404-353-2127
Jul 8	Decatur, GA	93-TOGA	2 nd M	7:00pm	Emory University, Chemistry Bldg. Amphitheater, Decatur Road	404-457-4775
Call	Hilo, HI	124-HIFOG	????		Shayne Enterprises, 180 Kinoole Street	808-935-8678
Jul 10	Davenport, IA	102-QCOG	2 nd W	7:00pm	CONFIRM	319-386-3484
Jun 24	Davenport, IA	102-QCOG	4 th M	7:00pm	CONFIRM	319-386-3484
Jun 11	Ames, IA	12-Midwest FOG	2 nd Tu	7:00pm	(even months) IA State Univ. 200 Engineering Annex	515-270-3573
Jul 9	Des Moines, IA	12-Midwest FOG	2 nd Tu	7:00pm	(odd months) Yonker's Computer Depot, 100 Merle Hay Plaza	515-270-3573
Jul 11	Sioux City, IA	38-SOG	2 nd Th	7:30pm	Western Iowa Tech., Room 508	712-252-2182
Jul 13	River Grove, IL	80-CFOG	2 nd Sa	1:00pm	College Center Bldg, Triton College, 2000 Fifth Ave	312-654-0986
Jun 23	River Grove, IL	80-CFOG	last Su	1:00pm	College Center Bldg, Triton College, 2000 Fifth Ave	312-654-0986
Call	Rockford, IL	84-GROG	????		CONFIRM	815-874-7146
Jul 4	W. Lafayette, IN	34-HOG	1 st Th	7:00pm	CONFIRM	317-743-5275
Jul 8	Evansville, IN	46-E-OSBUG	2 nd M	6:30pm	Oaklyn Branch Evansville Library, Oakhills & Lynch	812-479-5108
Jul 1	Bloomington, IN	87-IOU	1 st M	7:30pm	Indiana Univ, Cyclotron Facility, 2401 M. B. Sampson Lane	812-334-3234
Jun 25	Wichita, KS	21-OPEK	4 th Tu	7:30pm	St. Paul's Methodist Church, 1356 Broadway	316-832-0447
Jul 13	Louisville, KY	64-PCCL	2 nd Sa	1:00pm	Univ. of Louisville, Burhans Hall Rm 202, Shelbyville Road	502-451-0508
Jun 15	Lexington, KY	32-KOG	3 rd Sa	12:00n	213 Funkhouser Building, University of Kentucky	606-269-1684
Jul 8	Baton Rouge, LA	103-FLOG	2 nd M	7:00pm	Johnson Equipment Co., 4264 Perkins Road	504-292-1880
Jul 5	Lexington, MA	122-BOG	1 st F	7:30pm	Honeywell Electro Optical Div, Route 2A	617-484-1863
Jun 25	Bedford, MA	122-BOG	last Tu	7:30pm	Mitre Corp., Route 62	617-484-1863
Jun 17	Portland, ME	136-SMOG	3 rd M	7:00pm	Portland Jetport conference room	207-772-1616
Jun 17	Dearborn, MI	14-DeFOG	3 rd M	7:30pm	Ford Tech Center Cafeteria, 1700 Rotunda Dr	313-626-6641
Jun 20	Ann Arbor, MI	37-TOGA ^a	3 rd Th	7:00pm	Neuro Science Bldg. Univ. of MI, 1103 East Huron St	313-663-4669
Jul 9	Duluth, MN	118-DSO	2 nd Tu	7:00pm	1440 90th Avenue West	218-626-3344
Jul 11	St. Paul, MN	111-TCOG	2 nd Th	7:00pm	Univ. of MN, St. Paul Campus Rm B-45 Classrm Off Bldg	612-871-6076
Jun 25	St. Louis, MO	55-SLOG	4 th Tu	7:00pm	Thornhill Library, 12863 Willowick	314-991-4399
Jun 25	Kansas City, MO	97-MIZOG	Last Tu	7:00pm	TWA Bldg, 13 th & Baltimore	913-686-2853
Jul 2	Jackson, MS	58-MCPM	1 st Tu	7:00pm	Entre Computer Center, Capitol Street	601-981-2811
Jul 8	Charlotte, NC	71-LOGIC	2 nd M	7:30pm	Home Federal Savings and Loan, Carmel Road	704-377-1154
Jun 17	Raleigh, NC	8-ROCC	3 rd M	7:30pm	CONFIRM — Dreyfus Aud., Research Triangle Inst.	919-782-9576
Jun 24	High Point, NC	107-TROGIC	4 th M	7:30pm	(odd months) High Point College, Science Building, Basement	919-768-6808
Jun 27	High Point, NC	107-TROGIC	4 th Th	7:30pm	(even months) High Point College, Science Building, Basement	919-768-6808
Jun 20	Fargo, ND	117-O/KUG	3 rd Th	7:00pm	NDSU, Civil Engineering, Room 216	701-232-5722
Jul 9	Lincoln, NE	39-Lincoln LOG	2 nd Tu	7:30pm	5530 O Street	402-786-2965
Jul 9	Albuquerque, NM	127-AOG	2 nd Tu	7:00pm	CONFIRM	505-268-3606
Jun 27	Albuquerque, NM	127-AOG	last Th	7:00pm	CONFIRM	505-268-3606
Jun 19	Las Vegas, NV	25-VOG	3 rd W	7:00pm	CONFIRM	702-452-2544
Jul 2	New York, NY	135-NYOUG	1 st Tu	6:00pm	73 Franklin Street	212-594-5976
Jul 7	Syracuse, NY	82-SOUP	1 st Su	1:00pm	Location Varies — Confirm	315-471-1405

Continued next page

245-

Scott, 245-4888

Date	City	A.M.O.	Day	Time	Meeting Address	Contact No.
Jul 10	W. Hempstead, NY	88-LION	2nd W	7:30pm	Adelphi Univ Cont Ed Ctr, Room 110, Eagle Ave	516-481-0129
Jul 10	Ithaca, NY	101-FLOG	2nd W	7:30pm	Cornell Univ, G-94 Uris Hall	607-257-2030
Jul 9	Rochester, NY	132-FROG	2nd Tu	7:30pm	Monroe County Cooperative Ext. Center, 249 Highland Avenue	716-385-3456
Jul 10	Tarrytown, NY	104-WOG	2nd W	7:00pm	Tarrytown Public Library, N. Broadway	914-747-2110
Jul 1	Oberlin, OH	9-Ob^Os	1st M	7:30pm	Rice Faculty Lounge, Oberlin College	216-775-8290
Jul 8	Canton, OH	44-AKCAN	2nd M	6:30pm	Lake Cable Professional Bldg. 5850 Fullton Road NW	216-837-8926
Jul 10	Cleveland, OH	75-COG	2nd W	7:00pm	United Way, 3100 Euclid Avenue	216-371-4869
Jun 18	Cincinnati, OH	27-COG	3rd Tu	7:00pm	Central Trust Center 6th floor, 5th & Main Streets	513-232-4076
Jul 2	Dayton, OH	79-DOUG	1st Tu	7:30pm	St. Paul's Episcopal Church, Dixon Ave.	513-837-5651
Jul 10	Oklahoma City, OK	67-OKLOG	2nd W	7:00pm	Southwestern Bell, 111 Dean A McGee, Blue & Gold Rm	405-843-5925
Jul 3	Enid, OK	77-FOG/E	1st W	5:30pm	706 W. Maine	405-489-2228
Jun 27	Tulsa, OK	51-OUT	4th Th	8:00pm	Sheridan Library, 62 North Sheridan Road	918-587-3918
Call	Medford, OR	54-RVOG	????		CONFIRM	503-773-1222
Jun 26	Portland, OR	57-PMS	4th W	7:00pm	Bonneville Power Admin. Aud., 1002 NE Holladay St.	503-642-9692
Jul 7	Eugene, OR	128-LOCUG	1st Su	7:00pm	Farwest Federal Bldg., 96 E. Broadway	503-747-8242
Jul 13	Philadelphia, PA	121-PhROG	2nd Sa	9:30am	Merck, Sharp & Dome, Sumneytown Pike	215-648-5862
Jun 23	Pittsburgh, PA	50-TROG	4th Su	2:30pm	Mellon Science Building, Duquesne Univ.	412-456-3946
Jun 27	Lancaster, PA	74-LOG	last Th	7:30pm	3426 Horizon Drive,	717-285-4940
Jun 20	Lemoyne, PA	92-MIDPOG	3rd Th	7:30pm	One Stop Computer, 65 N. 5th St	717-243-7858
Jun 25	Greenville, SC	41-POGO	4th Tu	6:30pm	C. Douglas Wilson, 201 E. North Street	803-233-3434
Jul 17	Oak Ridge, TN	13-SMOG	3rd W	7:30pm	(odd months) ECS 136 Fairbanks	615-483-6857
Jun 19	Knoxville, TN	13-SMOG	3rd W	7:30pm	(even months) 11505 Kingston Pike	615-483-6857
Jul 4	Nashville, TN	119-MidTOG	1st Th	6:30pm	1228 16th Avenue So.	615-327-1715
Jul 9	Memphis, TN	15-MOG	2nd Tu	7:00pm	Memphis State University, Math Building	901-358-8128
Jun 20	College Station, TX	43-AGGNOG	3rd Th	5:30pm	A & A Building, Texas A & M Univ. Room 503	409-845-7770
Jun 19	Austin, TX	7-AEIOU	3rd W	7:00pm	Old Quarry Library off Far West Blvd. 7051 Village Center	512-836-3010
Jun 21	Houston, TX	76-OUCH	3rd F	7:30pm	Univ. Houston, 101 Farish Hall, KIVA Rm. (Use lot 1341 off Cullen)	713-931-1096
Jul 13	Houston, TX	108-CLOG	2nd Sa	9:00am	Gilruth Rec. Center, Johnson Space Center	713-554-4304
Jul 14	Amarillo, TX	28-POG	2nd Su	2:30pm	Downtown Branch Amarillo Public Library	806-355-7509
Jun 23	Amarillo, TX	28-POG	4th Su	2:30pm	Downtown Branch Amarillo Public Library	806-355-7509
Jun 20	Lubbock, TX	134-LOG	3rd Th	7:30pm	Texas Tech Univ. Law Bldg., Room 202	806-742-3920
Jun 20	Provo, UT	30-KAOS	3rd Th	8:00pm	Wiltec Research Co. 488 South 500 West	801-225-8293
Jun 20	Salt Lake City, UT	105-SMOG	3rd Th	6:00pm	Master Mind Computers, 448 S. 400 E	801-268-2831
Jun 20	Richmond, VA	52-CVOG	3rd Th	7:00pm	Red Cross Bldg, 4th and Main	804-270-4936
Jun 15	Norfolk, VA	78-TOG	3rd Sa	9:00am	ECPI, 3661 East Virginia Beach	804-495-1596
Jun 20	St. Croix, VI	70-StCOUG	3rd Th	6:30pm	St. Croix Country Day School Library	809-773-7551
Jul 1	Tacoma, WA	72-TOG	1st M	7:00pm	Parkland Library (Basement Mtg Rm) 404 Garfield So.	206-752-5582
Jun 19	Federal Way, WA	99-SKOG	3rd W	7:30pm	Highline Comm. Coll, Gold Rm — Bldg 4	206-643-3521
Jun 17	East Wenatchee, WA	10-WOG	3rd M	7:00pm	211 Ridgmont Drive	509-884-3279
Jul 11	Richland, WA	19-TROG	2nd Th	7:00pm	Richmond Public Library, Swift & Northgate	509-627-0950
Jul 10	Spokane, WA	123-SMUG	2nd W	7:00pm	Komputer Korner, N. 2001 Monroe	509-482-7989
Jul 1	Milwaukee, WI	22-MilWOG	1st M	7:00pm	Math Bldg. Rm E180, Univ. of W. M.	414-691-4241
Jul 2	Madison, WI	129-MOO	1st Tu	7:00pm	1210 West Dayton Rm B-214	608-233-0453
Jun 19	St. Albans, WV	59-Valley FOG	3rd W	6:30pm	Public Library, 6th Ave. and 4th Street	304-727-8716
Jun 23	Ashburton, Aust	131-VOUG	4th Su	2:30am	(odd months) Ashburton Public Library, 154 High Street	818-5062
Jun 26	Melbourne, Aust	131-VOUG	4th W	6:30pm	(even months) RMIT, Swanson St., Bldg. 12, Rm 908	818-5062
Jul 9	Edmonton, Alta	45-KOG	2nd Tu	7:30pm	Alberta Vocational College, 10215 - 108 Street	403-464-5088
Jul 8	Calgary, Alta	94-COUG	2nd M	7:30pm	911 - 32nd Ave NE	403-244-6268
Jul 10	Vancouver, B.C.	17-VPCC	2nd W	7:30pm	Hastings Community Center, 3096 East Hastings	604-298-6990
Jul 9	Victoria, B.C.	48-VIOG	2nd Tu	7:30pm	University of Victoria, Clearhuh Bldg.	604-381-0614
Jun 24	Toronto, Ont	120-OUCT	last M	7:00pm	Parkdale Public Library, 1303 Queen St. W.	416-533-1531
Jul 9	London, Ont	95-LOG	2nd Tu	7:30pm	Univ. of W. Ont., Elborn College, Room 2130	519-438-7724

Continued next page

Date	City	A.M.O.	Day	Time	Meeting Address	Contact No.
Jul 4	Westmount, P.Q.	73-Microcozm	1 st Th	6:30pm	Hillside Armoury, 3 Hillside Lane	514-932-4164
Call	Charlottenlund, Denmark	126-FORMICRO	????	5:00pm	CONFIRM	45-1-631760
Jul 8	Paris, France	110-OUF	2 nd M	6:30pm	Centre Malraux, 78 Bd Raspail	1-544-6216
Call	Hong Kong	116-HONG KOG	????		CONFIRM	852-5-8171714
Call	Jakarta, Indonesia	85-JOG	????		By arrangement only — CONFIRM	021-333-880
Jul 9	Auckland, New Zealand	53-NZOG	2 nd Tu	8:00pm	Auckland University, Human Sciences Building, Rm 336	275-4310
Jul 3	Wellington, New Zealand	109-CROG	1 st W	7:30pm	Compusales, 75-77 Ghuznee St.	0064-4-791-172
Jul 4	Dhahran, Saudi Arabia	33-DPOG	1 st Th	10:00am	ARAMCO Mgmt Training Center	874-4798
Jun 19	Johannesburg, So Africa	90-JOG	3 rd W	6:30pm	New Library Hotel, CNR Fraser, Function Rm, 2nd Floor	011-51-6304
Jul 13	Bangkok, Thailand	36-CP/M BUG	2 nd Sa	1:00pm	Action Compters 5126 Saladaeng Road, Silom	391-0963 x 86
Jun 19	Kaiserslautern, W. Ger.	62-FROG	3 rd W	7:00pm	Ramstein Air Base, Ramstein Rec. Center	49-6371-13117
Call	Schweinfurt, W. Ger.	112-SWOG	????		CONFIRM	09721-68064
Jul 1	Wiesbaden, W. Ger.	24-AGOG	1 st M	7:00pm	Lindsey Air Station, Bld. A-24 Rm. 301	069-69-3218

FOG FONES

A Listing of the FOG RBBS-RCP/M Systems

System ID	Phone number	Location	Size	Baud rate	When in operation	Notes
FOG #1	(415) 755-2030	FOG Office	47Mb	300/1200	24 hrs/seven days	
FOG #2	(604) 596-0314	Vancouver, BC	33Mb	300/1200	24 hrs/seven days	
FOG #3	(415) 992-8542	Daly City, CA	47Mb	300/1200	24 hrs/seven days	
FOG #4	(415) 591-6259	Belmont, CA	10Mb	300/1200	24 hrs/seven days	
FOG #5	(415) 424-1482	Palo Alto, CA	10Mb	300/1200	24 hrs/seven days	
FOG #6 (Library)	(415) 755-8315	FOG Office	10Mb	300/1200	24 hrs/seven days	Uploads Only
FOG #10	(717) 657-8699	Harrisburg, PA	20Mb	3/12/24	24 hrs/seven days	temporary #
FOG #11 (KAY*FOG)	(415) 285-2687	San Francisco, CA	10Mb	300/1200	24 hrs/seven days	Regist. only 6pm-8am
FOG #12	(415) 851-7732	Woodside, CA	40Mb	300/1200	24 hrs/seven days	
FOG #13	(405) 848-5317	Oklahoma City, OK	10Mb	300/1200	24 hrs/seven days	
FOG #14	(217) 344-4032	Urbana, IL	10Mb	300/1200	24 hrs/seven days	
FOG #15	coming soon	Cypress, CA	360K	300	3pm - 8am weekdays	
FOG #16	coming soon	Van Nuys, CA	11Mb	300/1200	24 hrs/seven days	
FOG #17	coming soon	Phoenix, AZ	10Mb	300/1200	24 hrs/except Mon	
FOG #18	(707) 557-4403	Vallejo, CA	360K	300/1200	24 hrs/seven days	
FOG #19	coming soon	Sylmar, CA	360K	300/1200	6pm - 9am weekdays	
FOG #20	coming soon	Zephyrhills, FL	360K	300/1200	7am - 5pm/M - F; 24hrs/S - S	
FOG #21	coming soon	Milton Keynes, England	10Mb	300/multi	24 hrs/seven days	
FOG #22	(817) 662-2487	Waco, TX	10Mb	300	6pm - 6am/M-F; 24hrs/S-S	
FOG #23	(615) 321-0669	Nashville, TN	11Mb	300	24hrs/seven days	
FOG #24 (Land of OSZ)	(502) 241-4109	Louisville, KY	760K	300	24hrs/seven days	
FOG #25	(319) 326-3904	Davenport, IA	360K	300/1200	24hrs/seven days	
FOG #26	(313) 792-7169	Mt. Clemens, MI	360K	300/1200	24hrs/seven days	
FOG #27	(404) 354-0662	Athens, GA	10Mb	300/1200	24hrs/seven days	
FOG #28	coming soon	So. Portland, ME	11Mb	300/1200	24hrs/seven days	
FOG #29	(617) 288-4667	Boston, MA	550K	300	5pm - 9am/M-F; 24hrs/S-S	
FOG #30	(714) 962-9999	Huntington Beach, CA	44Mb	300/1200	24hrs/seven days	
FOG #31	(415) 692-1406	Burlingame, CA	780K	300/1200	24hrs/seven days	
FOG #32	(408) 287-7108	San Jose, CA	360K	300/1200	24hrs/seven days	
FOG #33	coming soon	Oakland, CA	10Mb	300/1200	24hrs/seven days	
FOG #34	coming soon	Bowie, MD	10Mb	300/1200	24hrs/seven days	

cont. from page 38

prefer, you can use various character-width dot commands for the same purposes.

Print-outs put the Epson through hoops — a pleasure. There is an entire printer-driver program that allows you to configure your print-out for your printer from within the program. Great for me, since I use two printers: the Epson for speedy drafts and a TP-1 for letter quality text.

The program is not copy protected but comes from the factory locked. A phone call to NewStar upon receipt registers you as owner and provides the unlock key. Not a bad way to handle the piracy issue, I think. The end-user agreement is formidable and absurd.

Enough. There is more (excellent manual, excellent added conditional commands in Merge Print (MailMerge), but no spell-check program, excellent on-screen help menus, excellent factory support for my questions) but I can talk about them later if people are interested.

Drawbacks do exist. The only real and permanent one I have seen so far is that because of the added print-driver program and fuller messages and displays, NW.COM and its overlays use a whopping 136K. Not promising for Single Density owners. When I asked, NewStar said they have written a

"Help-less" version before and will do it again if there is sufficient interest. Sufficient interest? If ten or more Single Density Osborne owners are able to get together on this, that constitutes "sufficient interest".

And, finally, perhaps because of all the back-ups and temporary files it creates in conjunction with the unerase feature — reading, writing, and saving operations are considerably slower than WordStar. But it has more than enough in other areas to compensate for its lack of blinding speed.

• • • • •

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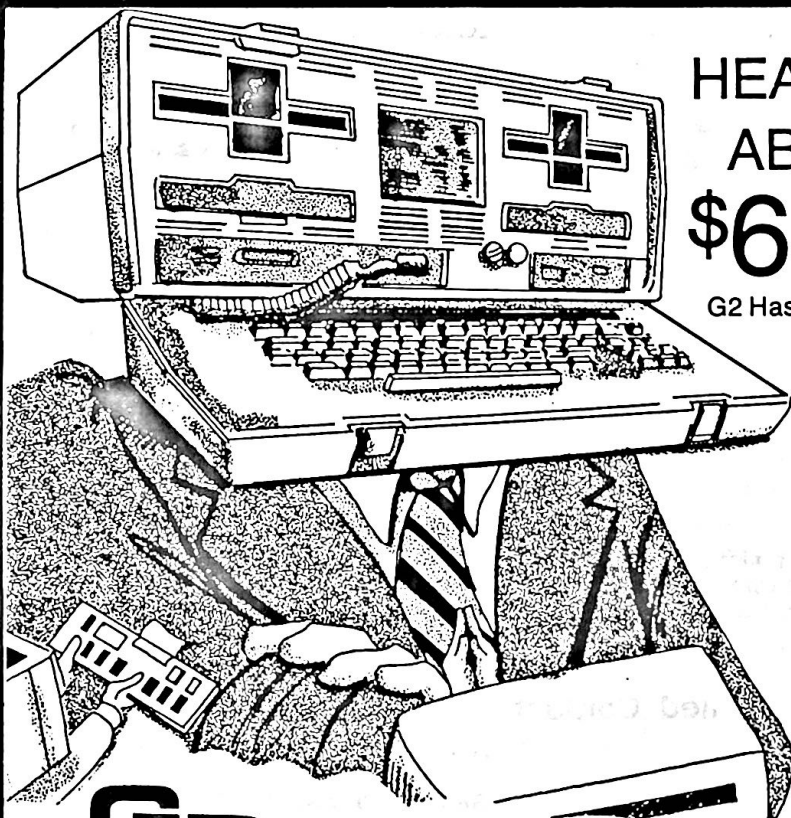
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SYSTEM NOTES

A Fix for Digital Research's MAC-80 Macro-Assembler

by Byron A. McKay

While using MAC-80 with CP/M's SUBMIT.COM utility, I found a peculiar bug, which is absolutely infuriating considering that both programs come from the same manufacturer. After some fiddling around with EDFILE.COM (public domain disk editor), and RESOURCE.COM (public domain disassembler), I have found a solution to the problem.

The problem is very complex in reality. This is the short form version. When using SUBMIT.COM, it is common to use a command tail with the submit command . . . Example:

SUBMIT FORMDISK A:␣

In this example, I want SUBMIT to run and execute the CP/M steps in the file FORMDISK.SUB and do it to drive A. In the actual .SUB file, the execution line might look something like this:

**FORMDISK \$1␣
DIR␣**

These lines are . . . 1. Execute the program FORMDISK and use the first item in the command tail as the disk drive (i.e: the \$1 is equal to the A: on the SUBMIT command line when executed) . . . 2. Do a directory . . . 3. Exit. The problem comes from the use of the \$1 by SUBMIT.

MAC-80 uses the '\$' to indicate that the characters following are sub-commands to be executed by MAC-80. Well, since SUBMIT expects the '\$' and some number (1, 2, 3, etc.) to designate data to be read from the command tail, a conflict becomes immediately apparent.

I investigated several solutions, and found that the simplest would be to change the character which MAC-80 uses to indicate commands. After searching through the file with RESOURCE, (an invaluable tool when the manufacturer of a software package won't talk to you), I found several locations where a compare of the '\$' character is used. I next went into what I call the "Lemming Mode", and began replacing each, one at a time, then running a submit file with the new character (I chose a '/' to follow Unix like command selection), until all had been tested. To my great surprise, none of the replacements had any effect.

So, back to the drawing board, and I tried replacing in pairs, after all there were only 71,000+ possible combinations of replacements, and about four hours later, found a pair of replacement locations which work. Here they are:

To patch using DDT or SID :
DDT and MAC.COM on A:

A) **DDT MAC.COM␣**

DDT VERSION 1.33

NEXT PC

2F00 0100

-S2825␣

2825 2F 24␣

2826 C2 .␣

-S282F␣

282F 2F 24␣

2830 C2 .␣

-C

A) **SAVE 46 NMAC.COM␣**

This should patch the current version of MAC-80 to perform as normal, substituting the '/' character for the '\$' character in the command tail. For example, you would now type 'MAC MYFILE /PZSZ' to -not- generate a .PRN file, or a .SYM file, instead of 'MAC MYFILE \$PZSZ' as before.

I hope this patch helps most of you MAC users out there, it took a long time to find the right combination, mostly due to D.R.'s lack of knowledge at the answer desk. And, their latest scam of asking for some unbelievable amount per year from those of us who have already paid for the product, to get the manufacturer to answer questions on it! Land Sakes! No wonder MicroSoft has taken over the 8086 world! Short sighted policies like this one could be the end of D.R. altogether.

The same patch should be possible with RMAC-80 as well, but will have to wait until I get some time to do it. Until then, may the Force be with you!

MATH* a.k.a. MATHSTAR

Upgrade for WordStar 3.30

by Jason M. Bloomberg

I bought Word-Pac a while ago and have been making use of most of the programs that come with it, with the annoying exception of one. Word-Pac is the collection of adjunct programs that work with the WordStar sold by O.C.C. It contains SpellGuard (a proof reader), Documate (and index and table of contents generator), Footnote (a footnote generator), Grammatik (a grammar proof reader), and Math*. Math* is supposed to allow the user to perform simple calculations of addition, subtraction, division and multiplication from within a WordStar document, while it is being written.

The version of Math* that comes with Word-Pac works only with WordStar versions 2.26 and 3.00. It will not work with version 3.30, which happens to come with the Executive, and I believe the Vixen, as well as any O-1 owner's who took advantage of the upgrade from MicroPro. The software publisher of Math* appeared to have disappeared from the face of the Earth. I haven't found anyone who could patch it to work on my copy of WordStar, nor could I find anyone to sell me an upgrade. Well, while looking for information about proportional



spacing, I contacted Writing Consultants in Fairport, New York. They sent me some literature with the information I wanted as well as some other products they carry, among which is Mathstar. I called them on their wats line 1-800-828-6293 and asked about an upgrade.

They would be happy to take care of me if I had purchased the program from them originally. I advised them I had not, and they were kind enough to direct me to Mr. Chuck Woodford, of WOODFORD ASSOCIATES and FORCE TWO LTD. I explained my situation to Mr. Woodford. HE WILL UPDATE THE PROGRAM FOR ONLY \$15.00! I find this to be a bargain since his program is selling for \$125.00 (\$75.00 when on sale). He requires that the master disk with Math* be sent to him with the payment for the upgrade. Some of the other programs from Word-Pac reside on that very same disk. Make a back up before sending it to him.

Send to:

Woodford Associates
1939 Belmont Ridge Court
Reston, Va. 22091
Attention: Mr. C. Woodford
Re:Math* upgrade

Be sure to include all the information regarding what type of machine you have, etc.

Mr. Woodford also wrote SynonymFinder. It is a thesaurus that operates while in WordStar. According to Mr. Woodford, the user moves the cursor up to the beginning of the word he wants to evaluate and initiates a double escape (<esc> <esc>). A window appears on screen listing various words. A selection is made by moving the cursor in the window from word to word. The chosen word is then activated by a carriage return. The new word automatically replaces the old word. It sounds like it might compliment SpellGuard very nicely. It sells for \$125.00 and is available only from Writing Consultants. Mr. Woodford will make upgrades, but he has granted Writing Consultants an exclusive for distribution of his new software.

Writing Consultants can be reached at: 11 Creek Bend Drive, Fairport, New York 14450. They maintain a 24 hour sales line and support is given on the same number, as listed above.

Stripping Variables in MBASIC Revisited

by Author Unknown

The October issue of the *FOGHORN* included an article by Mike Kahny in which he described an MBASIC GOSUB routine for deleting trailing spaces from character strings which have been brought into memory from random access files. His suggestion was very helpful to me in solving a problem. In the same article he indicated that he would like to know how to use the routine in a defined function.

The following segment of BASIC code converts Mike's suggestion into a function and since I don't remember seeing a reply to his question I thought I would send the code along in case others can use it. Here is user defined function STRIP\$.

```
100 DEF FNSTRIP$(ST$)=LEFT$(ST$+'' ''',
(INSTR(ST$+'' ''', '' ''')-1)
```

To use Mike's example, assume you have a variable CITY\$ which contains a constant with several trailing spaces. He used the constant "CINCINNATI ".

If you want to print this constant without the trailing spaces, just run the variable through the function. Here are a couple of examples to illustrate how it works.

```
500 PRINT FNSTRIP$(CITY$);'', OH''
```

```
-----
```

```
600 CITY$=FNSTRIP$(CITY$)+''', OH''
```

```
610 PRINT CITY$
```

Used in a program containing the define function statement, either of these examples will print CINCINNATI, OH.

Check for an Existing File

While I'm at it, here is another suggestion for a routine which I have found to be very useful.

Random access files are opened for both input and output at the same time. As soon as you open a file with the OPEN "R" instruction, an existing file is opened, or if there is no existing file, a new file is created. This can result in producing and attempting to use a file by mistake and can lead to disastrous results.

One way around this is to use the error checking capability in MBASIC and first open the file as a sequential input file. If the file opens without error you can then close it immediately and open it properly as a random access file. If you get an error while attempting to open the file as a sequential file you can notify the user and allow a correction in the file name.

Here is a sample of code that illustrates the use of this system.

```
100 PRINT ''HERE IS A LISTING OF THE ACCOUNT FILES.''
110 PRINT STRING$(60), ''*''
120 ON ERROR GOTO 1000 'Set first error branch
130 FILES ACCTS.* 'Use the FILES command to list files
140 PRINT STRING$(60), ''*''
150 ON ERROR GOTO 0 'Return to default error messages
160 PRINT
170 INPUT ''ENTER THE NAME OF THE ACCOUNTS FILE TO USE.'';F$
180 '
190 ON ERROR GOTO 1100 'Set error branch for sequential open
200 OPEN ''I'',#1,F$ 'Attempt to open the file
210 CLOSE #1 'Close immediately if no error
220 ON ERROR GOTO 0
230 '
CONTINUE PROCESSING
500 END
```

Error Routine section

```
1000 PRINT "No account files found.":RESUME 500
1010 '
1100 PRINT "Nonexistent file name. Please redo from start.":
1110 RESUME 100
```

More of Epson

PX-8 to Osborne 1

by Charles Martin

I purchased an Epson PX-8 a few months ago and spent the next three months with a great deal of frustration and disappointment. The major application I wanted from the machine was to be able to directly connect the Geneva PX-8 to my O-1 and I was promised when I bought the machine that it was "no problem".

Many trips to the dealer, many calls to Epson and hours of grief and not kept promises, the local Epson users group recommended another dealer that could help.

In about 5 minutes my problem was solved and I had an easy and cheap way to transfer my WordStar files (WordStar being my only application on the PX-8).

When I read the two articles in the March *FOGHORN* about direct communications to the O-1, I saw my big chance to contribute.

In this application, you only need to buy one item — the Epson #724 cable. That's it — no other software to buy.

1. Boot up Modem7 — (whatever version you have) on both the O-1 and the Epson PX-8. On my version of the Modem712 for the Osborne, 1200 baud is the default setting, so I don't have to do anything to prepare it. Now just type **RB** on the O-1 for receive batch files.
2. Load Modem7 — into either the A drive or the H drive on the Epson. If you have room on the A drive, I would recommend using it. The reason being that if you make a mistake on the H drive, it takes several minutes to reload it. The version I have of EPPXMDM is about 19K long and takes about 8-10 minutes to load using nonstop, nonverify. Now type **SET, C** for change, **5** for 1200 baud, **8** for 8 data bits, **1** for 1 stop bit and **N** for none on parity setting. You should now have "Communication initialization completed." Sometimes my system won't take me back to the command mode so **^E** will handle that.

I usually have several files to transfer so the next step is **\$B** for send batch and list all the files I want transferred. Make sure you enter a space between each file name, no commas, and once they are entered, return and sit back and watch.

The same goes for sending files from the O-1 to the PX-8, just reverse the commands.

I am looking for a version of Modem7 — for the Osborne that will allow me to change the baud rate as the Epson version I have will go up to 19.2K. 1200 is not bad but when you could have warp speed, why not?

One advantage to this method over using Term on the Epson is that whenever I invoke Term on the Geneva, it wipes out the

function keys I have written. It also keeps the equipment and procedures to a minimum. Also, it has been extremely accurate in transfers.

Thanks for all the great work everyone is doing in keeping Osborne users alive and well and getting lots of work done with their machines.

Recovering Lost Files

— Perfect Writer

by Richard Dedic

You edited and formatted a file with Perfect Writer only to find that only the .FIN file is left on disk? Do not panic!

This article describes how to recover a file which has been formatted to a .FIN file when the original file from which this file was formatted has been lost. You will need a copy of DU-V86.COM mounted on the A drive and the .FIN file mounted on the B drive.

1. Load DU-V86.COM by typing **DU-V86** at the A> prompt.
2. At the DU-V86 prompt (:) enter **lb ↵**. This logs you over to the B drive.
3. Enter a **m** at the DU-V86 prompt. This will cause a map of the B drive disk directory to be displayed on the screen.
4. Look for the name of the .FIN file you wish to deformat. Immediately to the left of file name will be displayed two sets of hexadecimal numbers like: 09-0A. These two numbers define the starting and stopping group numbers for this file.
5. Enter **Gnn** (where nn is the starting group number for this file) at the DU-V86 prompt. In this case the entry would be: **G09**.
6. Enter **D** for display. This displays the group that you selected and read with the G command.
7. You will see a screen display of the first part of the .FIN text in the right hand column. You will notice that the Perfect Writer print statement occupies the space from 00 to 3D.
8. Enter the DU-V86 command: **CH00-3D,20** which stands for change spaces 00 through 3D to hexadecimal value of 20 which is a blank.
9. Now using the **D** command, display the Group you have just modified. You will see the same group but with blank characters through character 3D.
10. Enter **W** to write the corrected group to disk B.
11. At this point you can call up the file under Perfect Writer and re-edit it. You will notice a variety of print control characters have been installed by the print formatter but these can be removed manually by normal editing functions, or by using other public domain programs like **FILTER** AND **TEXTCLEAN**.

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Jerry Pournelle, *BYTE*

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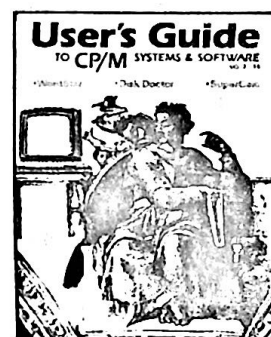
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DATTIM.COM Patch

by Scott Glickfield

Osborne and Morrow owners were given the original version of SuperCalc bundled with our computers. Many of us (and new Vixen owners) have upgraded to SuperCalc 2. SuperCalc 2 offers a great many enhancements over the original SuperCalc.

One enhancement was a utility which would enter today's date for inclusion into a spreadsheet. This utility was called DATTIM.COM. Although only the date could be entered into a spreadsheet, the program inexplicably asked for the time also. This was a total waste of time.

I kept waiting for a patch to be printed either by Sorcim or somebody who knows a lot more than I do about the inner workings of machine code. But when I failed to find a solution printed, I decided to try.

The actual patches are quite simple for anyone who has used DDT (or SID) before. Please follow step by step:

1. Put DDT in the A drive.
2. Put DATTIM.COM in the B drive.
(Make sure this disk is logged in.)
3. Type **DDT B:DATTIM.COM**
4. Type **S1C4**
5. Then type **C9** and carriage return ↵
6. Type a . (period) and ↵
7. Type **S630**
8. Enter a 0 (zero) and ↵
9. Type a . (period) and ↵
10. Type **^C** (CTRL-C)
11. Type **SAVE 9 B:DATE.COM**

If you followed the directions you ought to be able to type **DATE** at the A> prompt. The program now should only ask for the date and print out the correct day and date. Incidentally a bug in the program only allows dates up to Dec. 1, 1989. Hopefully by then Sorcim will have an update.

Scott is a member of the Affiliated Member Organization, COG (Cincinnati Osborne Group). For information on their meetings see the listing in the **CALENDAR** section of this issue.

• • • • •

Turbo Pascal On CO-POWER 88

by Jim Dunn

Over the Christmas holiday I was able to enter the three benchmark programs found in the July 1984 **BYTE** magazine article on Turbo Pascal. The article gives a general review of Turbo Pascal and gives the results of benchmarking three programs on an IBM PC and an unnamed CP/M 2.2 Z80A machine. Below is a comparison of the results I obtained using my Osborne 1's CO-POWER 88 to run the MS-DOS version of Turbo Pascal benchmarks.

Time for:	SIEVE	PUZZLE	QSORT
IBM PC (PC-DOS 2.0)			
Compile to memory	0.8 s	5.7 s	3.4 s
Compile to COM.FILE	2.0 s	3.6 s	4.0 s
Execute in memory	15.0 s	69.0 s	1.3 s
Execute COM file	15.0 s	69.0 s	1.1 s
COM file size	9K	13K	11K
Z80A (CP/M 2.2)			
Compile to memory	0.5 s	3.0 s	2.0 s
Compile to COM.FILE	5.0 s	12.0 s	9.0 s
Execute in memory	23.0 s	77.0 s	1.0 s
Execute COM file	25.0 s	77.0 s	1.0 s
COM file size	8K	12K	10K
COPOWER-88 (MS-DOS 2.11)			
Compile to memory	0.8 s	na	3.1 s
Compile to COM.FILE	8.0 s	na	8.5 s
Execute in memory	14.0 s	na	0.5 s
Execute COM file	13.5 s (15.5 s)	na	0.5 s (0.6 s)
COM file size	9.6K	na	11.2K

The first problem I encountered was that the PUZZLE program as entered from the **BYTE** listing took forever to run. With the array size set at 511 the program was still running after 80 minutes. At that point I powered down and booted back to MS-DOS, entered Turbo's editor and reduced the array size to 100. At that limit the run time was over 60 seconds. I could not find any discrepancy between my program and the listing in **BYTE**. If anyone has run PUZZLE with Turbo Pascal in the times indicated above please contact me and let me know your secret!

The Osborne 1's CO-POWER 88 took longer to compile to COM.FILE but had quicker execution times than the IBM PC. Both results were expected. The 8088 in the CO-POWER board has to send disk data to the Osborne Z80 to be put on the Osborne disk drives which have a much slower step rate than the IBM PC disk drives. The execution times are slightly faster because the CO-POWER's 8088 is being clocked faster than the IBM PC's 8088. The times in parentheses are execute times for the MS-DOS COM files on an IBM PC which naturally do not match the **BYTE** times for COM file execution.

My conclusions are that the CO-POWER will execute the same program faster than an IBM PC but will get clobbered whenever disk I/O is involved. The slow disk I/O times confirm what I have suspected for some time from loading MS-DOS programs and the slow response to directory commands.

CO-POWER 88 SWP Inc. 817-469-1181
2500 E. Randol Mill Rd. 817-861-0421
Suite 125
Arlington, TX 76011

TURBO PASCAL
Borland International 408-438-8400
4113 Scotts Valley Drive
Scotts Valley, CA 95066

• • • • •

Terminal Control Data for Various Terminals by Author Unknown

Morrow 20

LEVEL = 3
CURSOR = ESC = C+32 R+32
CLR = ^Z

Morrow 50 (Freedom)

LEVEL = 3
CLR = ESC *
CURSOR = ESC = R+32 C+32

Morrow MDT-60

LEVEL = 3
CLR = ESC *
CURSOR = ESC = R+32 C+32

Morrow MT-70

LEVEL = 3
CLR = ESC *
CURSOR = ESC = R+32 C+32

ADM 3A or 5

LEVEL = 1
CURSOR = ESC = R+32 C+32
CLR = ^Z
LO =
HI =

ADM 22

LEVEL = 3
CURSOR = ESC = R+32 C+32
CLR = ^Z

ADM 31

LEVEL = 3
CURSOR = ESC = R+32 C+32
CLR = ^Z

Heath H19

LEVEL = 1
CURSOR = ESC Y R+32 C+32
HOME = ESC H
CLR = ESC E
LEFT = ESC D
RIGHT = ESC C
UP = ESC A
LO =
HI =

Visual 200

LEVEL = 2
CURSOR = ESC Y R+32 C+32
HOME = ^A
CLR = ^L
RIGHT = ^F
LEFT = ^G
UP = ^Z

HI = ESC '3'
LO = ESC '4'
CEOS = ESC y
CEOL = ESC x

Soroc 120

LEVEL = 2
CURSOR = ESC = R+32 C+32
CLR = ESC *
CEOS = ESC Y
CEOL = ESC T

Televideo 910

LEVEL = 2
CURSOR = ESC = R+32 C+32
CLR = ESC *
CEOS = ESC Y
CEOL = ESC T

Televideo 912C/920

LEVEL = 3
CURSOR = ESC = R+32 C+32
CLR = ESC *

Televideo 925/950

LEVEL = 3
CURSOR = ESC = R+32 C+32
CLR = ESC *

ADDS Viewpoint

LEVEL = 2
CURSOR = ESC Y R+32 C+32
HOME ESC Y SP SP
CLR = ^L
RIGHT = ^F
UP = ^Z
HI = ^O ESC '0' A
LO = ^N
CEOS = ESC k
CEOL = ESC K

ADDS Viewpoint 3A+

LEVEL = 1
CURSOR = ESC = R+32 C+32
CLR = ^Z
LO =
HI =

ACT 5A

LEVEL 2
CURSOR = ^T R+0 C+0
HOME = ^]
CLR = ^L
RIGHT = ^X
UP = ^Z
CEOS ESC K
CEOL ESC I
HI = ESC B
LO = ESC C

Qume 102

LEVEL = 3

CURSOR = ESC = R+32 C+32

CLR = ^Z

ANSI

LEVEL = 1

CURSOR = ESC [R+1 ; C+1 H ASCII

HOME = ESC [H

CLR = ESC [H ESC [J

HI =

LO =

CEOS = ESC [J

CEOL = ESC [K

LEFT = ESC [D

RIGHT = ESC [C

UP = ESC [A

VT52

LEVEL = 1

HOME = ESC H

CLR = ESC H ESC J

RIGHT = ESC C

LEFT = ESC D

UP = ESC A

CURSOR = ESC Y R+32 C+32

HI =

LO =

VT100

LEVEL = 2

CURSOR = ESC [R+1 ; C+1 H ASCII

HOME = ESC [H

CLR = ESC [H ESC [J

LO = ESC ['0' m

HI = ESC ['1' m

CEOS = ESC [J

CEOL = ESC [K

LEFT = ESC [D

RIGHT = ESC [C

UP = ESC [A

Wyse

LEVEL = 3

CLR = ^Z

CURSOR = ESC = R+32 C+32

Teleray

LEVEL = 3

HOME = ESC H

CLR = ^L

CEOS = ESC J

CEOL = ESC K

RIGHT = ESC C

UP = ESC A

CURSOR = ESC Y R+32 C+32

INLINE = ESC L

INSCHAR = ESC P

DELLINE = ESC M

DELCHAR = ESC Q

HI = ESC R @

LO = ESC R B

IBM 3101

LEVEL = 1

HOME = ESC H

CLR = ESC L

LEFT = ESC D

RIGHT = ESC C

UP = ESC A

CURSOR = ESC Y R+32 C+32

HI =

LO =

Hazeltine 1420/1500

LEVEL = 2

CURSOR = ^~Q C+0 R+0

HOME = ^~R

CLR = ^~\

RIGHT = ^~P

UP = ^~L

HI = ^~^

LO = ^~Y

CEOS = ^~X

CEOL = ^~O

Hazeltine Esprit

LEVEL = 2

CURSOR = ^~Q C+0 R+0

HOME = ^~R

CLR = ^~\

RIGHT = ^~P

UP = ^~L

HI = ^~^

LO = ^~Y

CEOS = ^~X

CEOL = ^~O

None of the above

LEVEL = 0

CURSOR = ESC = R+32 C+32

.....

A Toolkit of Utilities

by Carl Greene

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After patching my CP/M system to do away with the sign on messages, speed up the disk drives and boot up with XDIR's comprehensive but compact directory, I found I had to boot up all my software 'by hand'. That is to say, if I wanted dBASE II I had to type DBASE↵ or for NSWEEP type NSWEEP↵, etc.

Not being especially fond of superfluous keystrokes and growing weary of system function key capacity overload I took a hint from WS.COM and renamed my workhorse programs to save strokes. I wound up with:


```

C.....COPY
D.....dBASE II
E.....ENSOFT2
FK.....FK.COM
N.....NSWEEP (NS205)
P.....PIP
V.....VDO12
WS.....WordStar
X.....XDIR

```

No longer a chore, it became almost pleasurable to do a quick XDIR by merely pressing X↵, or load NSWEEP by stroking N↵. It also set me to thinking.

Things had speeded up but not nearly enough. I still had to reach for my 'public domain' disk to get NSWEEP or VDO12, or grab my CP/M UTILITIES disk to get COPY, PIP, SYSGEN and the like. Why not, I thought, make up a toolkit of these most often used programs and place them on all my program disks.

The toolkit I ended up with looked like this:

```

C.....COPY      5K
E.....ENSOFT2   7K
FK.....FK       4K
N.....NS205    11K
P.....PIP       8K
V.....VDO12     4K
X.....XDIR      3K
-----
                        42K

```

Now, you might well ask: isn't that a lot of disk space used up? It is. But then, it isn't necessary to have the full toolkit when your disk can't afford it. When disk space gets tight, some of the tools can be thrown overboard. NS205, COPY, PIP, and XDIR all overlap function-wise so just make your choice.

The first to go over the side for me is PIP, then COPY and ENSOFT2. After that, it's mostly a question of what do I need most?

With my new toolkit in place I can boot up to an automatic XDIR (with fast drives), load VDO12, do a little lightning-fast rough text entry, ENSOFT2 the file to my WordStar disk in the B drive, do the final editing there (including paragraph reformatting), then load NS205, rename a few files, squeeze some old text files for archival storage and quickly delete a file or two. Now load FK and configure a new set of function keys to help automate my latest brainstorm. I just noticed one file that's written mostly in lower case when it should have been upper-case. No, problem though, just load PIP and the [U] option changes it. I'm done so it's off to COPY to copy all of tonight's work to the backup disks. I've done all this without a single disk swap (until COPY) and with a minimum of key strokes.

My toolkit makes mass production a reality for me.

• • • • •

Comments and Patches for MicroPro's WordStar/MailMerge Upgrade 3.3 for the Osborne 1

by Warren A. Welsh

Against my better judgment, I ordered MicroPro's Wordstar/MailMerge Upgrade shortly after receiving their promotion material in March or April, 1984. Having access to an Executive with level 3 WordStar I knew of and had used the 'column move' capability and also was aware that MicroPro was no longer supporting (providing) dot RMnn (print time reformatting to a specified right margin.) This capability is, it seems to me, a must if you still have the 52 column Ozzie. I have not used the Conditional print capabilities in the new MailMerge. On balance, the package was probably worth the \$104 it cost. Those with the 80 column Ozzie would probably find it more worthwhile since they would presumably not need or use the dot RM to the same degree.

The Upgrade arrived, complete with two manuals and three SD diskettes. I set about installing it for my Olympia 105 (with Dataface interface) only to discover that, despite the manual's instructions, there were no provisions for setting the communications protocol nor selecting the printer driver. The Olympia 105 has a 2K buffer, is serial and backspacing but requires X-on/off protocol and this meant that the Primary List Device had to be assigned as CRT rather than TTY. I called MicroPro three times. After being told User Technical Service was busy twice I asked for its Director. The lady who answered took my message (What gives with these items?) and promised I would be called. (Now several months later I still have not heard.) After the third call I put in a call to the FOG office and left a message. Thank goodness, Gale called promptly that afternoon. And thanks to Gale, I got out of trouble.

Who would have thought that when the DD Upgrade Setup program said 'Diablo (X-on/X-off)' it meant protocol not printer! With that out of the way I set about some other things. Perhaps others with WordStar 3.3, including those with Executives will find something of interest below.

Can't see INSERT ON? Brad Baldwin gave a solution in the *NEW Portable Companion*, p. 15. Change WS.COM address 0249 from 50h to 4F (or 4D or 4E). That works for 2.26 but the address is 0233 for the 3.3. The 'label' is WID. For this and the changes which follow I used DDT.COM but for changing WS.COM you can also use INSTALL (2.26) or WINSTALL (3.3). I learned of the latter from Jim Switz note (*FOGHORN*, May, 1984, p. 48) saying that entering a "+" instead of A-F or X at the Installation Menu gives access for patching.

Want a BLINKING CURSOR? (Vers. 2.2 or 3.3) I patched in Lee Swordy's WSPATCH (*FOGHORN* Mar. 1984) but rather than modify his program for the 3.3 I used DDT's A (assembly) mode to directly enter the assembled 'patch' portion. If you don't have an assembled, loaded and run copy from 2.26 the following will do but you must start at WS address 02DD. It is set to produce a medium blink rate (5). (I had installed this starting at 02E0 but when I read Phil Pflager's fix for the off-

screen blinking cursor in the June, '84 **FOGHORN** I reentered the first three assembly instructions beginning at 02DD so as not to have to reassemble.) If you use DDT's A mode you may want to verify that the space between address 02DD and 0312 is filled with Nulls.

02DD CPI 06	02FA LHLD EF5A
JNZ 030E	MOV A,M
PUSH H	XRI 80
CALL E7F6	MOV M,A
02E6 LXI D,0700	JMP 02E6
02E9 PUSH D	0304 LHLD EF5A
02EA CALL EI06	0307 MOV A,M
POP D	ORI 80
ORA A	MOV M,A
JNZ 0304	POP H
DCR E	MVI A,06
02F7 JNZ 02E9	030E CALL 173F (1777)*
DCR D	0311 RET
JNZ 02E9	

(to next column)

* All entries are the same for both the 2.6 and 3.3 versions of WS EXCEPT that address 1777 is used for 3.3 instead of 173F.

One other patch is required. For 3.3, at address 1D78, change from CALL 1777 to CALL 02DD. For 2.26, address 1D33 is changed to CALL 02DD instead of CALL 173F. WS.COM (vers 3.3) is 18K (2.26 is 14K) so when you SAVE use 4 times the program size in K, i.e. 72 for 3.3 or 56 for 2.26 — a lot simpler than the more complex, and accurate, hex calculations we've read so much about — and I have never had any problem.

Want CP/M ARROW values on Exit from WordStar? Again I used Lee Swordy's WSPATCH, above, but entered only the assembled 'patch' portion and again used DDT and the A mode. I entered them beginning at 0312 and 0321 as shown below. Perhaps my WordStar arrows are different from most but making left arrow a Delete was a must and I found ^K (control K) and ^Q being used extensively. The ^F (right one word) on the right arrow was dealers choice. So below are my entries:

<u>WordStar Arrows</u>	<u>CP/M Arrows (on exit from WS)</u>
0312 LHLD E17F (**)#	0321 LHLD E17F (**)#
MVI M,0B (^K)#	MVI M,0B (^K)#
INX H	INX H
MVI M,06 (^F)	MVI M,0C (^L)
INX H	INX H
MVI M,11 (^Q)	MVI M,0A (^J)
INX H	INX H
MVI M,1F (^DASH)	MVI M,08 (^H)
RET	RET

* For information only — DO NOT ENTER!

** The address E17F is correct for OS1's CP/M whether patching vers 2.26 or 3.3 of WordStar. (This patch will not work on the Executive but see Abrahams article, page 71, September, '84, **FOGHORN**.)

Two other patches are required to provide the necessary jump to the above Arrow definitions. For WS vers 3.3 at address 0287 (INISUB) insert JMP 0312 to initiate the WS arrows and at address 028A (UNISUB) insert JMP 0321 to set the arrows to CP/M on exit from WS. For vers 2.26 these jumps are inserted at address's 02A4 and 02A7 respectively.

Want to see ALL of the NO EDIT MENU and the CURSOR on a 52 character screen? (With vers 3.3 the cursor is at the extreme lower right of the menu. And of course the menu is too long for the screen.) This requires changes to WSMSG.S.OVR rather than to WS.COM.

To realign the OPENING MENU I changed hex code 7C to 0E at addresses 036D, 03AD and 03ED of WSMSG.S.OVR. Here I used DDT in the S mode (enter S address & ↵ (return) (no spaces), see address & old value, enter new value & ↵, end by entering period at next presented value.) These three changes simply act as carriage return / linefeeds and place the 'H Set Help Level', 'L Change Drive' and 'R Run a Program' entries on separate lines. It isn't a balanced appearing menu but it is simple to change.

I also changed 'M Run MailMerge' to 'M Merge-Print' and reentered 'S run SpellStar' 16 addresses lower, putting trailing 00's in at the end. These two changes put these two entries on the screen. If you want to rewrite the whole menu it starts about 0300.

To bring the cursor back on screen I entered 0E to replace 20 at address 0498 of WSMSG.S.OVR. Here, too I used DDT and the S mode. This change puts the cursor about the center of the screen.

WSMSG.S.OVR version 3.3 is 30K or 235 records so SAVE 118; version 2.26 is 26K or 208 records so SAVE 104 for it.

Date Only Patch for DATTIM.COM by Claude Ostyn

Several people have asked for a way to make DATTIM prompt only for the date, since SuperCalc 2 does not use the time information and DATTIM will not let you out until you entered a valid time of day. [I use four zeros. David] Here is a simple way to patch DATTIM to request and show only the date. The patched version is then saved as DATE.COM.

Put your system disk with DDT.COM in drive A and your SuperCalc 2 disk with DATTIM.COM in drive B.

Listing 1.

When you see boldprint: Type (and press ↵ (return)):

```
A> DDT B:DATTIM.COM
DDT VERS 2.2
NEXT PC
0A00 0100
- A190
0190 NOP
0191 NOP
```

```

0192 NOP
0193 .
- A2CD
02CD XRA A
02CE STA 630
02D1 NOP
02D2 NOP
02D3 .
- ^C (Just press control-c)
A> SAVE 12 B:DATE.COM
(end of listing 1)

```

Now try it out. Type **B:DATE ↵**. You will be prompted for the date. As soon as you entered a valid date it will be shown to you with the day of the week, but the time will not be shown. If it does not work, you probably made a mistake in typing the patch. Just try again. If you are familiar with DDT and the SAVE command, you will probably have noticed that we are saving 12 blocks where it appears that 3 would do. Sorcim went to great lengths to try and prevent anyone from patching DATTIM using DDT, so believe me and use 12 in the SAVE command or you might regret it.

Good, but not enough, you might say. How about chaining automatically to SuperCalc after typing in the date? This can be done with the small patch overlay in listing 2. You should use the "N" option of WordStar to create this file and name it DATIMPTC.ASM. Be sure you type it exactly as it appears, though you may skip any line that begins with a ";" (comment lines).

Listing 2.

```

; DATIMPTC.ASM
; OVERLAY TO PATCH DATTIM.COM
; TO ASK FOR DATE ONLY
; AND CHAIN TO SUPERCALC2
BDOS EQU 5
CR EQU 0DH
LF EQU 0AH

ORG 190H
NOP
NOP
NOP

ORG 19FH
JMP CHAIN

ORG 2CDH
XRA A
STA 0630H
NOP
NOP

; CHAIN PROGRAM PART
ORG 0A00H

CHAIN:
LHLD BDOS+1 ; GET BDOS ADDRESS
MVI L,0
MOV A,H

```

```

SUI 8H ; 16H PAGES DOWN IS CCP
MOV H,A
PUSH H ; SAVE CCP POINTER
MVI L,88H ; POINT TO CCP + 88H
MVI M,08H ; AND PUT LSB OF CCP + 8 IN THERE
INX H ; POINT HL TO CCP+89H
MOV A,H ; AND PUT MSB OF CCP POINTER IN THERE

MOV M,A
LXI D,MESSAGE ; PRINT MESSAGE
MVI C,9
CALL BDOS
POP H ; POINT HL TO CCP AGAIN
PUSH H
MVI L,07 ; ADJUST TO POINT TO BUFFER ADDRESS
XCHG ; POINT DE TO COMMAND STRING ; SWAP POINTERS
LXI B,0
LDA COMMAND ; GET LENGTH OF COMMAND STRING
ADI 2
MOV C,A ; SET COUNTER
DB 0EDH,0B0H ; Z80 INSTRUCTION LDIR (BLOCK MOVE
; BC BYTES FROM (HL) TO (DE) )
POP H ; POINT HL TO CCP LAST TIME
LDA 4
MOV C,A ; CURRENT USER/DRIVE
PCHL ; AND PASS CONTROL

```

; COMMAND TO CHAIN TO: 1ST BYTE IS NUMBER OF BYTES IN COMMAND
; MUST END WITH AT LEAST ONE ZERO

```

COMMAND: DB 3,'SC2',0
MESSAGE: DB CR,LF,LF,9
DB 'LOADING SUPERCALC2'
DB CR,LF,'$'

END

```

(end of listing 2.)

Put the disk with DATIMPTC.ASM in drive B and your CP/M system disk with ASM, LOAD and DDT in drive A, then follow the instructions in listing 3.

Listing 3.

When you see boldprint: Type (and press ↵ (return)):

```

A> ^C (control-C only)
A> ASM DATIMPTC.BBZ
CP/M ASSEMBLER - VER 2.0
0A4C
000H USE FACTOR
END OF ASSEMBLY

```

(Put your SuperCalc 2 disk with DATTIM.COM in drive B)

```

A> B:
B: A:DDT DATTIM.COM

```


FOG MEMBER LIBRARY NEWS

CSTRIP.BAS

by Sam Tove

I have been writing computer programs on and off for more than 15 years. Yet I am by no means an experienced programmer; just a computer junkie like many of you. Every experienced programmer will tell you that you cannot put too many comments in a program. The comments should be complete enough to allow you to easily follow the flow of your program years later and should include definitions of the variables used. In addition, nested FOR . . . NEXT loops should be indented so that you can easily see where these begin and end. Also, the program is more easily read if commented blank lines divide sections that do a particular operation. Even though we may recognize the truth of this advice, most of us do it half-heartedly if at all. After all it takes patience, time, disk space and increases the run time of interactive programs such as those written in MBASIC. Indeed, many programs we find written in computer magazines (including the *FOGHORN*) are often difficult to follow and understand because the writers have failed to do this and the editors have not insisted that it be done. *[So true. David]*

The relative ease of following a well commented and indented program can be illustrated by looking at the commented version of CSTRIP.BAS, the program to strip comments. This is particularly clear if you contrast the commented version with the stripped version. (See the examples listed below.)

Unfortunately, a thoroughly commented program does consume disk space and runs slower than one stripped down. For example the commented version of CSTRIP takes 11K of disk space whereas the stripped version takes only 3K. When it was run, to strip comments and blanks from itself, the commented version took 4 minutes 44 seconds whereas the stripped version did it in 3 minutes and 42 seconds. The best compromise would be to use a commented version as a reference document, to get the bugs out of the program and verify the logic. Then when you are sure the program is doing what you want it to do, use the stripped version as the running program. The line numbers of both programs would be the same and therefore the commented program would always serve as a reference should problems arise or should you wish to modify the program later.

To this end you can use the MBASIC program CSTRIP to strip out comments, and collapse the text by removing unnecessary blanks. The commented program is automatically

saved in ASCII format and renamed with the type .TXT and the stripped program (also in ASCII format) is saved as the .BAS program.

CSTRIP removes comments only if designated by an apostrophe and not by "REM". After all, even the running version should have a lead line or two indicating what the program does. The REM must be in capital letters. Additionally, since comment lines are removed, be sure that any branching commands (GOTO, GOSUB, IF . . . THEN, RESUME, RESTORE) branch to an active command and not a comment. The program will overwrite the file B:filename.TXT, so if you have a file under this name that you wish to save, rename it before running CSTRIP.

In order to use CSTRIP, place your commented, debugged MBASIC program, saved in ASCII format (i.e. saved by the command SAVE "B:filename.BAS".A), in drive B. The A drive should contain MBASIC.COM and CSTRIP.BAS. Boot up MBASIC and when the screen shows OK type RUN "CSTRIP". Enter the information asked for by the program and, although it will take a little time, when you next see the OK you will have two programs saved on the disk in drive B. One will be the original basic program now renamed B:filename.TXT (where filename stands for the name of the file you typed in) and a stripped, collapsed version, B:filename.BAS, that will be the MBASIC program you will run.

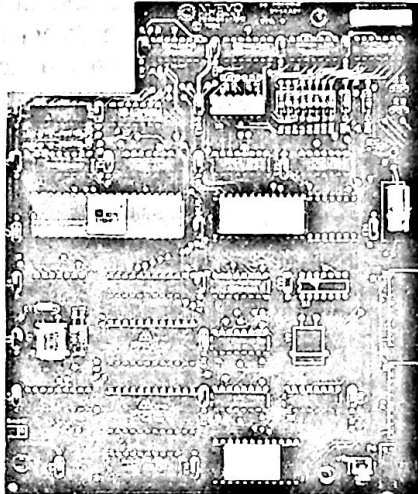
When running CSTRIP, the first thing the user will see is a clearing of the screen, a line of instructions and a request to type the name of the file to be stripped. This is carried out by lines 350-370. Even though the instructions call for the program name without designating drive or type, lines 400, 410 and 440 trim these out, if entered, and create two file names, B:filename.TXT and B:filename.BAS. Lines 470 and 480 then check to see if B:filename.BAS is on the disk by trying to open the file. If it cannot (for example a mistyped name) an error condition is raised and line 320 branches the program to line 2040, the start of an error handling subroutine. In this case line 2040 instructs the program to branch to a section (lines 510-550) that will print a message stating that the program does not exist. Note in line 550 the use of the built-in function, INKEY\$, to allow the program to stop for the user to read the message. If the file was present, no error condition would occur, the program would close the file and branch around the error message section by going to line 580.

Line 580 erases the file B:filename.TXT. If B:filename.TXT does not exist then an error condition is raised, again causing the program to branch to the error handling subroutine (line 2040). This time the error had occurred in line 580 and line 2070 of the error handling routine instructs the computer to ignore the erase command and continue. Line 610 renames the file B:filename.BAS as B:filename.TXT. After informing the user about the names of the two files, line 680 asks the user to enter the screen width of his Osborne. Lines 690-710 set the screen width and 740-780 is an error trap for a typo. Lines 810-910 define numerical and string variables. In line 950 the file B:filename.TXT is opened for reading and in line 980 the file B:filename.BAS is opened for writing. This will automatically recreate B:filename:BAS which will be the output file.

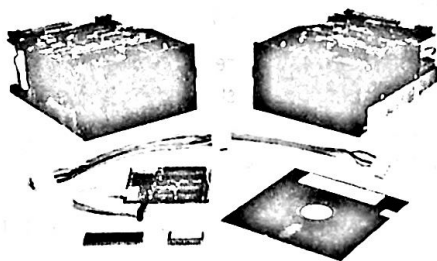
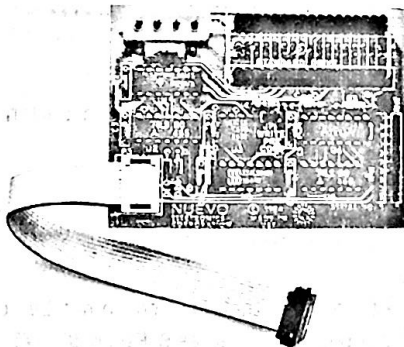
cont. on page 58

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After clearing the screen again (line 1010) the program starts a loop (lines 1080 to 1930) that will read, modify, and write the lines of B:filename.TXT in B:filename.BAS. Line 1110 sets a flag that will be reset if a line is to be skipped because it is a comment. Line 1140 reads the next line of B:filename.TXT to the variable LIN\$. This will be processed character by character and a new line (NEWLIN\$) will be built and written into B:filename.BAS.

Line 1170 sets the pointer (ST) to the position of the first blank past the line number. It also sets the position of the last character of the line (ND).

The new line that will be added to the program B:filename.BAS is initialized with the line number and a blank in line 1200.

Lines 1230-1250 loop to locate the first non-blank character past the line number and initial blank. The pointer ST is then set to this position thereby skipping any unnecessary leading blanks.

Line 1280 looks for the word "REM" as the start of the line. If found the entire line is rewritten and saved when the program branches to line 1810.

Line 1310 looks for a comment begun with an apostrophe and if found branches around the statement that writes the line to the new program.

Next a loop, lines 1340-1360, looks for the last non-blank character of the line and resets the end pointer ND, thereby eliminating any trailing blanks.

We then go into a new loop, encompassing lines 1390 to 1780 that will examine each successive character between the starting and ending pointers. The character is read by line 1420 and added to the developing string NEWLIN\$ by line 1760. In between the character is examined and the developing line modified accordingly.

If an apostrophe is encountered, line 1470 instructs the program to branch to the write statement (line 1810) thereby ignoring the rest of line that had ended with a comment.

A quote (ASCII character code 34 decimal) will be sought by line 1500. If not found the program branches around a section designed to handle literal strings in the program line. This section looks for the position of the second quote, line 1530, and adds the entire literal string to the developing new line by means of the code in line 1560. The position of the pointer in the loop is adjusted by line 1590 to reflect this and the program then goes on to read the next character.

The remainder of the character loop section is designed to eliminate any blanks that surround one of the 13 characters in the string array CL\$(). This array includes the characters < > = + - / * (: , ; and a blank. Lines 1650 to 1670 loop to examine if the character read is one of these.

If the previous character had been one of the special characters the BLNKFLG would have been set to 1. If this character is a blank it would be following one of the special characters and can be deleted. This is done in line 1620 by branching to the end of the character loop thereby skipping the blank.

If the current character is one of the special characters then the flag, BLNKFLG, is set and the program branches to line 1730. At line 1730 the last character of the newly written line

(NEWLIN\$) is examined. If it is a blank, it is trimmed from the line. If the character was not one of the special 13, then the program checks (line 1700) to see if the previous character had been one of these, i.e. if the flag BLNKFLG had been set to 1. If the BLNKFLG is 0 then we branch to line 1760 that adds the character to NEWLIN\$.

When the last character of the line has been written to the new line, the new line is added to the end of the file (B:filename.BAS) now being created by the code of line 1810.

The remainder of the program simply writes to the screen the words "Line read", in dim, the line read (LIN\$), the words "Line written" also in dim, and the line written (NEWLIN\$). If the line was a comment, the words "Line skipped" are printed on the screen.

A program (DBSQUASH) is in the FOG library on APP.038 that does similar things to DBASE II files.

Example 1. First few lines of CSTRIP.BAS showing the comments included in the original source code.

```

10 REM CSTRIP.BAS A program to remove comments (designated by
   ' not REM)
20 REM from a basic program saved in ASCII. It also removes extra
   blanks.
30 REM Copyright 1985 by Sam Tove, Raleigh, NC
40 REM May be copied freely for non-commercial use
50 '
60 '***** TABLE OF VARIABLE ASSIGNMENTS *****
70 '
80 '* I, J, K, L, IB = Loop counters
90 '* BLNKFLG = Flag showing character read is one with
   deletable blanks
100 '* C$ = Character read from input line
110 '* CL$() = Array of characters that can be cleared of surrounding
   blanks
120 '* E$ = Escape
130 '* 'ERR=53' = Error code that file could not be found
140 '* FILE1$ = Commented file saved as B:FILENAME.TXT
150 '* FILE2$ = File stripped of comments saved as
   B:FILENAME.BAS
160 '* LIN$ = Line read from file
170 '* LR$ = Dim on, string 'Line read ', dim off
180 '* LS$ = Dim on, string 'Line skipped ', dim off
190 '* LW$ = Dim on, string 'Line written ', dim off
200 '* ND = Position of last character of line read
210 '* NEWLIN$ = Line to be written to file
220 '* NJ = Position of second quote of a literal string in line
   read
230 '* NOLINE = Flag shown -missing text here...-
280 '
290 '***** INITIALIZATION AND INPUT SECTION *****
300 '
310 '---- SET ERROR TRAP TO RECOVER IF FILE NOT FOUND ----
320 ON ERROR GOTO 2040
330 '
340 '--- CLEAR SCREEN, PRINT INSTRUCTIONS AND GET FILENAME ---
350 PRINT CHR$(26): PRINT:PRINT:PRINT
360 PRINT 'Program must be a basic program saved in ASCII format
   on Drive B.'

```

Example 2. Same first few lines of CSTRIP.BAS after the comments have been removed.

```
10 REM CSTRIP.BAS A program to remove comments (designated by
' not REM)
20 REM from a basic program saved in ASCII. It also removes extra
blanks.
30 REM Copyright 1985 by Sam Tove, Raleigh, NC
40 REM May be copied freely for non-commercial use
320 ON ERROR GOTO 2040
350 PRINT CHR$(26):PRINT:PRINT:PRINT
360 PRINT "Program must be a basic program saved in ASCII format
on Drive B."
```

* * * * *

The FOG Disk Library — An Overview *by Dick Ezzard*

Historical Background

In the first days of FOG, programs and files made it into the FOG library in a sequential and fortuitous manner. Programs that got in early made it onto Disk 001, the next batch of programs went on Disk 002, and so forth. This is similar to the organization (lack of it) of many home disk libraries and may be familiar to some readers. At a certain point in growth things become difficult to keep track of and to find. Then it is time to get organized.

Fortunately for FOG when that point approached, salvation appeared in the person of Jim Woolley, the original FOG disk librarian, to whom many, many people, strangers all over the world, owe a tremendous debt of gratitude. It is an axiom of library science that the more effort put into documenting and cataloging and cross-referencing an acquisition, the easier it will be to retrieve. (The corollary: easy slovenly accumulation of material will make future retrieval of specific items damn near impossible . . .) Mr. Woolley took the piled-up accumulated software and organized functional categories for storage. Those foresighted categorizations largely hold true today.

Beyond that, he systematized the documentation of acquisitions so that there was some information (sometimes only a warning of the lack of information) "about" every file that made it into the library. And he made sure that every file in the library was catalogued by title and cross-referenced to a disk identified by disk title (indicating category) and number. And he acted as a gate-keeper to make sure that what made it into the library worked; he kept the garbage out. Well, mostly.

The overhead effort, the sheer labor involved in the kind of necessary redundancy-building that makes a library useable is terrific. Jim handled it on a volunteer basis for two years. As a measure of his efforts (and the way the library has grown) there are now sixteen people listed as librarians, each handling some special segment of the now highly categorized and organized FOG disk library. Springing from Jim's dedicated hard work there has developed a bountiful resource of soft-

ware and information which is in constant use nation-wide, even world-wide, by FOG members and others. It is now generally recognized that the FOG disk library is the leading public domain depository for 8-bit CP/M based materials.

There are now over two hundred and fifty disks, in the neighborhood of 3000 separate files, and more stuff is coming in all the time. Talk about an information explosion!

The library has gone electronic and direct access by telecommunications to the whole library or partial libraries is possible on many FOG sponsored RCP/M systems. Dedicated volunteer operators of these remote systems do their best to meet the needs of their "clients" for specific files which can be downloaded over the telephone lines and captured in any computer equipped with a modem. If a particular file is not online right when you want it, typically a request for access will get the item up where you can pick it off in 24 hours or less.

(Aside — You might want to compare that convenience to inter-library loan of a physical book at a public or university library which transaction may take days or weeks to arrange. Also, if a physical book is checked out by someone else, you can't have it right now. With electronic information there can be as many copies of a file as there are different people who need it.)

The FOG disk library is a modern instance of how people can cooperate to increase the availability of information freely donated to the public domain. The spread of information, the free exchange of information in electronic form has to be a real increment in the true wealth of the human family which has always consisted of a shared store of knowledge. Every program in the library (well, yes, perhaps there are some duds), make that every useful program in the library — is a tool devised by man, often improved upon by others, donated for the use of mankind in general. The FOG disk library is, of course, maintained for the convenience of FOG members in particular. But any item can be freely transferred to others. There is no restriction on the free exchange of this public domain information.

(And what a contrast to the kind of grasping, miserly, hoarders of information who seek to use knowledge as a weapon of advantage. Which it can be. And also compare to those greedy infomercials who treat new information as a concealable commodity to be closely held and sold at great price . . .)

With that background information in place, let's explore some ways to use this bountiful cooperative information resource, the FOG disk library.

Using the Library The Easiest Way

The absolute best way to get something out of the FOG library is to have a friend who shows you the snazzy new program she got out of the library and when you like it, she on the spot makes you a copy.

The second best way is: someone tells you about a good program and what library disk it is on and you go directly to that disk and make a copy — word of mouth facilitates transfer of useful information.

Many of us need never progress beyond word of mouth exploitation of the ever-expanding, somewhat daunting FOG disk library. You know or surmise that something is in there, you ask a few questions, someone tells you what it is exactly you are looking for and where exactly it is. You get it, and you're done.

These days you can ask your questions by modem and get your answers electronically. Word-of-modem access follows an age old human pattern for spreading information, diffusion from person to person, somewhat haphazard, but it works and it is as simple as asking "Seen any good movies lately?"

Other Ways to Use the Library

Intro

What follows in this article is a roundup of several other, somewhat more organized, methods for accessing the FOG disk library, for finding out what is in there and for getting good stuff out. Possibly you don't need to know any more than the old reliable word of mouth method and thus need read no more. Or, you can file this roundup article without reading against the day you might need it in a hurry. Certainly, unless you're a librarian or concerned in some way with maintaining a large library of disks you won't need to know ALL the methods. But it's no sin for the casual user to pick and choose and find a favorite method or two to get around in the library.

Most of this article is concerned with methods of gaining logical access to the material in the library. The physical methods you use to obtain a file, whether you copy a disk or "download" it over the telephone network, can be treated elsewhere. In fact old-fashioned print materials can also aid logical access. So whether you use just a computer, or use a modem-equipped telecomputer and whether you find a file on a physical disk or in an RCP/M's "LBR" electronic representation of a disk for downloading, these physical differences need not concern us now.

Suffice it to say that in a great step forward, whatever is available on physical disks in the FOG disk library can also be accessed in the comfort of your own home. There is no longer a requirement to make a physical rendezvous with the file you need. You can check it out conveniently by telecommunications.

But for the majority of users who do not have modem capability (yet) the method of physical access will be checking out a physical disk at a FOG meeting and copying it, and then adding selected files to one's own library.

Or maybe U.S. mail delivery of a desired disk from a compatible pen-pal supplier. (Tip: always make up two separate copies when swapping disks by mail. The additional cost is negligible, and the convenience of backup in case of a glitched disk is priceless. So do 'em two at a time.) If worse comes to worst you can purchase disks direct from FOG at the modest price of \$5. per disk, \$5. handling per order.

The point is, the files are there for the asking and obtaining by several means of physical access. The details of how you physically get them into your computer I will leave for another day.

Finding Aids — Preliminary

One of the things computers are great for is keeping track of stuff. So I find it poetic in a circular kind of way that some of the programs in the FOG library are programs for keeping track of computer programs. In fact a goodly portion of the library, not a large portion but a critical portion, is devoted to information about the library itself and the utility programs which make access to files easier.

The section of the library which concerns the library itself is to be found in the subset of disks named with "FOG/LIB.00n." As of this writing there were seven disks in this category. One file, to be found on FOG/LIB.001, called LIBRARY.DOC is in fact an explanation of the organization of the entire library. As of this writing, the major categories are:

- LIB — LIBRARY INFO
- GAM — GAMES GENERIC
- UTL — UTILITIES GENERIC
- APP — APPLICATIONS GENERIC
- MIS — MISC. GENERIC
- LNG — LANGUAGES GENERIC
- HAK — TUFFIES AND BROKEN PROGRAMS
- OS1 — OSBORNE 1 SPECIFIC PROGRAMS
- EX1 — OSBORNE EXECUTIVE PROGRAMS
- MMD — MORROW MICRO DECISION SPECIFIC
- PMC — PMC MICRO MATE SPECIFIC
- MAX — LOBO MAX SPECIFIC
- KAY — KAYPRO SPECIFIC
- ZOR — ZORBA SPECIFIC

In print, an excellent, succinct article which gives a full overview of the general library structure, policies, and hints for use was published in the *FOGHORN*, Vol. III, No. 11, August 1984, under the title: *Changes in the Library Structure*. It was written by Gale Rhoades, Executive Director of FOG so you know it lays down the law and gives chapter and verse.

Knowing the overall mapping of the library is not so helpful to the user, however. To know that there are 50 disks in a library category called FOG/UTL is only a little less daunting than the knowledge that there are 200 disks in the library overall. You still have to get inside the damn disks.

Finding Files by Name and by Fragments of Name

One main finding aid is the triumvir [*look it up, I did. Ed*] composed of the programs CAT.COM and NEWCAT.COM and the big list of files called MAST.CAT which lists every file in the library referenced to the disks on which it may be found. It is similar to the title catalog in a library of books.

NEWCAT.COM is used to produce a MAST.CAT file list by "processing" the directory section of a disk and linking it to a diskname and number (which is merely the first directory entry on the disk being processed). The list-making function of NEWCAT.COM can also be done by earlier versions called variously FCAT and NCAT and perhaps some others. But a version now called MCAT.COM is the latest, easiest, most up-to-date version and should be making its way into the library soon, and in fact might be the "standard" version by the time you read this.

If you have NEWCAT.COM and all the library disks in hand, you could make yourself a list of all the library files very easily, by just putting a disk in drive B and running NEWCAT. All files on that disk will be put into, added to, a special file called MAST.CAT; the processing of one disk takes about five to ten seconds. Just repetitively process all disks in the set you want to catalog and the MAST.CAT list will be built accordingly. Of course, with all the disks in the FOG library that would take some time and the repetitious disk switching would be extremely boring.

Therefore, that task is already accomplished for you by the librarians and one of the premiere files in the FOG library is the MAST.CAT file which includes all files cross referenced to disk. You can find it on the disk called FOG/LIB.CAT.

The giant main list to be found in MAST.CAT which completely covers the FOG disk library would be cumbersome to operate with were it not for the searching powers of the little program, "CAT.COM." What is CAT.COM? It is a highly specialized utility whose only purpose in life is to work with files called MAST.CAT and search for strings entered in the command line. At a CP/M prompt, A>, give the command:

CAT FILENAME.TYP

and you will quickly get an answer which shows the FILE-NAME requested and a designation for every disk (in the catalogued set) on which the file is inscribed.

CAT.COM is most useful for looking up the location of a file once the name is known. However, since it accepts wildcard entries, fragments of a filename, or generic filenames can be searched for. Individual letters in the search string may be substituted for by the symbol "?" and groups of letters may be substituted for by the asterisk "*" so that you may take trial shots for files on which you only have the vaguest idea of the name.

For example: a CAT search for "*.COM" returns a list of ALL files in the library with the extension of .COM.

M*. returns all files beginning with M.

M*.COM gets all COM files beginning with M.

M?M*. returns all files whose name begins with M, and have third letter M.

Etcetera.

Obviously anyone can use NEWCAT (or the newer MCAT) to keep a personal MAST.CAT of all his own disks or separate MAST.CAT's for various sets of disks. Thus CAT and NEWCAT may be useful to you regardless of whether you keep on hand an up-to-date version of the MAST.CAT which pertains to the entire FOG library.

There are also several auxiliary programs which work along with the NEWCAT, MAST.CAT, CAT.COM trio, which are improvements on the basic idea. To mention a few: CAT2.COM, MAST.LST, XCAT.COM. The specific workings of these programs can be found in the various documentation files which are within the FOG/LIB subset of disks. (Files labeled ".DOC" often accompany public domain programs and explain their use. Thus MCAT.DOC is the documentation file for MCAT.COM. If there is no DOC file, try looking for an explanatory .HLP file.)

Worthy of special mention is the program FIND.COM, latest incarnation as of this writing, FIND52.COM, which can search any ASCII file for match-ups. Whereas CAT.COM searches only files named MAST.CAT, FIND will allow a command line which specifies the name of a file or group of files to be searched, and a phrase or several phrases to be searched for. The answer is a display of the entire line(s) on which match-up hits are registered. The answers show on the screen and can also be directed to a printer or (using the latest version of FIND) to another new disk file!

FIND was originally used mostly to aid search of MAST.LST files but the ability to output disk files now makes it easy to cobble sub-lists, sub-catalogs derived from some larger list. For example, using FIND to read all .COM files in a MAST.CAT and directing output to a file called COM.CAT would quickly produce a catalog of COM files only.

Before moving on, it would be remiss not to mention that the current versions of the programs in the filename cataloging system described above, CAT, MCAT, MAST.CAT, and the marvelous FIND are all the handiwork of Irvin M. Hoff, a premier assembly language programmer who has donated his efforts to the public domain for the past several years. His name should be familiar to users of the famous MDM7 series of communications software for he also took on as a public service the responsibility of maintaining and updating that so-useful software. An incalculable debt is owed to Mr. Hoff by all the many users of the wonderful utilities he has given to the CP/M world. Thanks from all of us . . .

Finding Files by Subject

So far, the finding aids discussed have all related to getting at the library through the filename. You don't have to know the full name, but you have to have some idea of likely names to try. However, names are not always functional, and sometimes you know what you want to do or want to read about under a logical subject, but don't have the foggiest idea what a programmer may have called the kind of file or program you are looking for. Under those circumstances it would help to have a subject index to the FOG library.

Unfortunately, so far there is no such index. The closest thing to a topical catalogue of the files is in various groupings of auxiliary documentation which is added to each disk as it is made up and added to the library. These files are first and foremost to be found on each disk under the rubric DISK.DOC. The diskdoc file for each disk abstracts and summarizes the files on the pertinent disk. If you can get to the right disk you can find out what's on it, get brief explanations of the files by reading the text file diskdoc.

Since each disk is classified into some major category such as applications or utilities, it is apparent then that the DISK.DOC for a particular disk will hold information about a special subset of files within a category, namely those files on that disk.

Stemming from the original diskdoc descriptions are several conglomerations of disk docs arranged in various ways.

The first arrangement is chronological: As each disk was added to the library, the appropriate diskdoc file was pub-

lished in a journal type news file such as NEWS0884.LIB. The periodic library news files (which have been published in print in the *FOGHORN* and on disks in the FOG/LIB section of the library) when read in total, summarize/abstract the library holdings but in chronological order of insertion into the library. The various news files amount to periodically collected DISKDOCS, plus additional notes.

So in the unlikely event that you know when it was that a file you are looking for was added to the library, you could scan in the appropriate news file and perhaps find a mention. And discover the name.

Another grouping of disk document files is to be found in the SYNOPSIS files on several special library disks, which is the closest approach to subject indexing in the FOG library at present. The synopsis files contain text descriptions of disks, i.e. abstracts, by major CATEGORY of program/file.

In a pinch, the appropriate synopsis file can be searched by a WordStar ^Qf find operation looking for likely topical words that might appear in the description of a file you are looking for. Even better, the synopsis files can be preliminarily checked for presence of a guessed at word by the use of the FIND.COM utility described earlier. If you know the category in which to search, and file was librated under the correct category, and you know a descriptive word or two about the kind of file you're looking for, with luck you may get some hits.

Since the SYNOPSIS files will always be in flux, requiring updating from time to time, they are kept on several special library information disks called "FOG/LIB.X+1, FOG/LIB.X+2, etc." To look at a current synopsis of files by category, you should of course try to get hold of a recently updated version of such a disk.

Accompanying the rather large synopsis of entire categories on the special library information disks are categorical sister files which cover only the creme de la creme of the entire FOG library. These are the "BEST-OF . . ." series of files which are abstract type information about the particular programs deemed to be the most important as of last updating. The BEST-OF files do not cover every file in a category and are thus not suitable for exhaustive searches. But they are a wonderful place to start browsing if you are new to the library or just want to check that you have all the latest versions of the most famous public domain programs. For example, on the disk called FOG/LIB.X+2, you would be well advised to browse the file entitled "BEST-OF.APP".

The topical collection of diskdoc descriptions is also available in print in the form of the hardcopy "LIBRARY.DOC" which is the collected summary description of all files listed disk by disk. This attractive bound document is sold mail-order by FOG for five bucks and also includes information on the overall disk library layout.

Commercial Adjuncts

For sake of completeness I will mention that there are commercially available (for \$\$\$) programs that can accomplish many of the cataloging functions more conveniently, all from within one menu-driven operation. One of these, SRX.COM is in use on the FOG RCP/M sections and keeps

separate file lists for each major category of disks within the library. It allows conduct of a "FIND" operation from within the program, access to all lists simultaneously, printing in formats, time/date stamping of catalog entries, and so forth. SRX.COM keeps its catalog files in a format of its own not conveniently readable by other programs. Someone who is managing a large library on a single hard disk might well find useful such a commercial program if fairly priced.

What You May Run Into When Searching

Versions: A program has a life cycle, and a rudimentary larva first donated to the public domain, may sprout wings and appear in several or more subsequent versions. A famous modem-driving communications program is perhaps the [epitome example] of this kind of growth. It came out first simply as MODEM.COM, quickly obtained the name Modem7 (probably the seventh version of the original program) and then went through many modifications within the appellation Modem7. The name was shortened to MDM7xx so that it would fit within the six character restriction of CompuServe Information Services appellation scheme, along with version numbers. Thus MDM712, MDM725, MDM740, etc., all newer versions of the original, sometimes expanded, sometimes abbreviated, and sometimes even an actual improvement.

Duplicate files: The same exact file may appear in the library in several locations. This kind of redundancy is all to the good and may make a useful file easier to pick up. It is also possible that the same file (or a near duplicate version) is in the library under several different names. Ah, well. A rose by any other name can still be quite useful no matter which name you know it by.

Duplicate names on different files: The art of naming things is not yet an exact science, and duplication occurs. Just as several different John Smiths may reside in different zip code zones, so may different files under the same name be found on different disks. There are, for just one example, several different programs under the name of SORT.COM.

Conclusion

The FOG disk library supports a large number of finding aids as described above. Although not the easiest thing in the world, the determined user should be able to find out within a reasonable time whether what he wants right now does indeed exist within the library. If a file's name is known, or a good approximation thereof, locating a file via CAT operations is swift and sure. The problem of physical or electronic access to the file for copying purposes is left for another day, since this article was purposely limited to discussion of finding files and browsing techniques.

One facility which is still lacking is the computer equivalent of a subject index: an accessible database file of the entire FOG library which would be searchable by keyword. Pointing out this shortcoming is in no way meant to be criticism of the collective efforts of the people which have brought us this super bountiful information collection. The labor involved in constructing such a keyword index would be forbidding, were it to be accomplished by one person, perhaps a life's work at

the rate the library is growing. And the library is eminently usable without the luxury such a keyword index represents.

However, there is abroad in the land, presently, an idea for cooperative construction of useful databases. The idea is that many people would each do a small part of keyboarding a specialized database. Of which a subject index to the FOG library would surely be a dandy example. Be on the lookout for your chance to participate in an asynchronous long range quilting bee to stitch up just such a keyword index. Perhaps someone will soon instigate a guerrilla databasing project related to the library.

Televideo Library Notes

June 1985

by Pete Masterson

Good news for all Televideo users! The FOG office now has a Televideo TPC I. With this piece of equipment, the FOG technical staff will now be better able to help Televideo users' with their problems. (Hopefully, by the time this column is printed, the FOG staff will have figured out their new machine.)

This new addition at the FOG office is courtesy of Mission Peak Systems and Blackship Trading Company. Mission Peak and Blackship have pooled their resources to make a special purchase of Televideo TPC I computers and will be marketing them at a price well under \$1000. (At this writing, a final decision on the price has not been made pending a determination of software to be included with the computer. In addition to the standard Televideo package including word processing, spreadsheet and business graphics programs, Mission Peak/Blackship hope to bundle the Uniform disk reading/formatting program, MBASIC and (possibly) a FOG membership with each computer sold. Watch for a Mission Peak Systems/Blackship Trading Company ad in the *FOGHORN* for full details.)

The Mission Peak/Blackship deal on the TPC I offered at the West Coast Computer Faire was so good, I couldn't pass it up. So, in addition to the TS-802's at my office, I now have a TPC I to carry around (with my O-1).

Reports have reached us that the Modem7 program on library disk FOG/TVI.001 configured for the TPC I/TS-803 doesn't work on all machines. Apparently, Televideo has made changes in the BIOS (ver. 1.5 and later) that causes Modem7 to fail. The FOG technical staff is working on this problem, and we will release a revised Modem7 overlay for the TPC I/TS-803 as soon as possible.

We are still looking for submissions of Televideo specific programs for our section of the FOG Library. Utilities that set up the terminal characteristics (like turning off the #\$\$%& TPC I keyclick) or change arrow keys to WordStar configuration, etc. would be particularly useful. We did receive an 803/TPC function key programming utility that was unfortunately "trashed" during its journey from Finland, (we are now trying to get a good copy). These type programs can make a good computer great, so send in your favorites! Thanks.

Miscellaneous Library Notes

June, 1985

by Troy Soult

-FOG/MIS.025

This diskette contains the newest RCP/M RBBS list available. Two of the files were submitted by Bond Shands of "KAY-FOG". He is the sysop of FOG #11. The R???-59.lqt is a list of the RCP/M's or RBBS nationally. For some reason only one FOG system was listed so I also included the FOG RCP/M — RBBS list. There is also SORTORDR.DOC which describes the computers order in which it sorts.

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Are you tired of trying to find your favorite software package in Osborne format? Would you like to use your Osborne generated Wordstar files, dBase II data and SuperCalc files on the IBM-PC at work (and vice-versa)? Do you want to trade public domain software with a friend who owns a Kaypro?

MEDIA MASTER

Questions and Answers

Q. What hardware configuration does MEDIA MASTER require?

A. MEDIA MASTER runs on a double-density Osborne-I (either Osborne or Nuevo upgrade) or Executive computer. Other versions are available for the IBM-PC and compatibles, the Kaypro 2 and II (soon for the 4 and 10), the DEC Rainbow, and soon for the Zenith Z-100.

Q. Can I transfer programs from "foreign" computer formats and run them on my Osborne?

A. The answer is yes and no. In general, most "generic" 8-bit CP/M

software will run just fine on your Osborne. There are tens of thousands of public domain programs and hundreds of excellent commercial programs in this category. Software that makes use of machine specific hardware (such as most graphics packages) or software that does not include an "install" program for different cursor control commands will probably require modification before use on your Osborne.

Unfortunately, you cannot run 16-bit, IBM software on Osborne 8-bit computers. Nothing short of new hardware can make this possible, but most data files transferred to or from "foreign" formats (even the 16 bit formats) are completely compatible.

This means that Wordstar files, Lotus 1-2-3 files, dBase II data and command files, SuperCalc files and many other types of data files may be freely exchanged with other computers. For example, the same Wordstar file could be started on an IBM-PC running PC-DOS and finished on the Osborne using Wordstar under CP/M.

Q. Why are Apple, Commodore and Atari formats not included?

A. The unique disk controller circuitry used in their machines makes it impossible to reprogram your Osborne computer to access their disks.

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OSBORNE 1

SWP CO-POWER 88

by Jim Dunn

I purchased the SWP CO-POWER 88 board with 256K memory in May of 1984. I then proceeded to tear my Osborne 1 apart and install the add-on boards. I replaced the existing Z-80 microprocessor with the small SWP board which contained a Z-80 and various other chips and a ribbon cable. The ribbon cable was routed to the SWP main board which contains the 8088 and 256K bytes of memory plus support chips and ROM. The main SWP board is installed above the Osborne 1 main logic board and below physical drive A. The power for the SWP board is tapped from the existing Osborne power supply. Reassembling was quite a chore as I had to remove interfering projections from the Osborne case. The instructions I had did not mention this, but a phone call to SWP helped me with this task. I finally got the computer back together and up and running.

The impact on my computing habits has been profound. My usage of the CO-POWER utilizes the 8088 and the 256K memory as a RAMDISK. The ramdisk software is part of the package along with MS-DOS V2.11. When the RAMDISK is loaded you can select which drive assignment. I select it as drive A and the software loads the CP/M tracks from your system disk and reassigns physical drive A and B to logical drive B and C. Thus when you do a warm boot (C) the information is on the ramdisk and one does not need a sysgened disk in physical drive A. When the 8088 is installed as drive A it has 245K of memory available. I copy over to the ramdisk the needed software and data files and then proceed to compute.

With 245K of disk memory available I typically will load WordStar 3.3 and MailMerge (94K used) and my text files. WordStar is very fast when used in ramdisk. No waits for any overlay and loading of the next portion of your text file takes less than a second. Since the ramdisk will lose memory when you power down you must save any edited files to floppy disks. I usually have both the master disk and the backup disk online and write the new data files to the disks periodically. Even this is fast as only one floppy disk is being used in the transfer.

The other aspect of the CO-POWER board is the direct use of the 8088 by the operator. MS-DOS V2.11 is the standard DOS provided but CP/M-86 is an optional DOS. I don't have much experience with using 16 bit software because no other software comes "bundled". Thus the user has to decide and purchase any software that will be needed. On request, SWP will send a list of MS-DOS and CP/M-86 software that will run

on the CO-POWER 88. This list is being updated as more software is evaluated. The CO-POWER 88 is not an IBM PC "compatible" so IBM PC specific software will not work in your Osborne 1.

The CO-POWER 88 runs the 8088 at 5.3MHz and draws 750 milliamps at 5 volts (close to 4 watts). Memory can be either 128K or 256K. The two add-on boards weigh less than one pound. When used as a 16 bit computer, the 8088 uses the Z-80 as an intelligent I/O processor. This means that the MS-DOS "SYS" files are in the Z-80 memory and frees up memory and disk space for MS-DOS.

I did install a fan (OSCOOL) because of the extra heat that is generated by the main CO-POWER board.

One irritating feature is the lack of a true hardware reset on the Osborne. If for any reason you need to reset the 8088 you must power down and then power up and reload all the software again. Adding a reset switch to the CO-POWER board will be done the next time I open up the Osborne case.

I did some timing tests with WordStar and the SWP ramdisk. I am trying to find out why WordStar seems to run so much faster on the ramdisk verses using floppy disks. The times in the table show the various configurations that I timed. The first column shows the fastest operation possible is the ramdisk-ramdisk combination.

The time to load Ramdisk as drive A with the AUTOST booting program is 9.6 seconds (s). To load Ramdisk from the CP/M prompt takes 5.2 s. To load WS, MAILMRGE, WSMGSGS, and WSOVLY1 (3.3 version total of 94K) with NewSweep 1.99 with Verify ON takes 45 s.(floppy to ramdisk). To move the same files, floppy to floppy, with NewSweep Verify ON takes 96 s.

OPERATION (WordStar 3.3 modified)	Drive A	Drive A	Drive A	Drive B
	Ramdisk	Ramdisk	Floppy	Floppy
	WS	Text	WS	Text
To get to OPENING menu	3.3 s			9.6 s
To Auto 'N' edit 50K file	5.9 s			19.8 s
To 'N' edit from OPENING menu 50K file	3.7 s			8.2 s
To end of 50K file from beginning	9.7 s			17.9 s
To beginning of 50K file from end	9.0 s			16.9 s
Find and replace 200 times 50K file				
with display on	5:08 m			5:43 m
with display off	17.5 s			39 s
Save and exit	3.6 s			15 s
To copy to backup disk	22 s			--
OPERATION (WordStar 3.3 modified)	Drive A	Drive C	Drive A	Drive C
	Ramdisk	Floppy	Floppy	Ramdisk
	WS	Text	WS	Text
To get to OPENING menu	3.3 s			9.6 s
To Auto 'N' edit 50K file	7.6 s			16.9 s
To 'N' edit from OPENING menu 50K file	5.3 s			4.7 s
To end of 50K file from beginning	14.4 s			9.6 s
To beginning of 50K file from end	15.9 s			9.1 s
Find and replace 200 times 50K file				
with display on	5:43 m			5:08 m
with display off	39 s			17.7 s
Save and exit	11.7 s			6.0 s
To copy to backup disk	--			26 s

The ramdisk is usually about 2 to 3 times faster than using floppy disk only. Another time saver is the keyboard type

ahead while WordStar is finishing your last request.

CO-POWER 88 SWP Inc.
2500 E. Randol Mill Rd.
Suite 125 817-469-1181
Arlington, TX 76011 817-861-0421

Fast Up dBASE II Ver. 2.41 for the Osborne 1 by Jerry Boyce

Are you tired of waiting for the dBASE dot prompt to come up each time you want to test a command file or run a program where the date is of no use? Have you looked at this:

Enter today's date or return for none
(MM/DD/YY) : $\hookrightarrow$
Copyright (C) 1983 Ashton-Tate Inc.

*** dBASE II Ver 2.41 1 February 1984

and made the $\hookrightarrow$ enough times? Well help is at hand, thanks to two great programs, EDFILE.COM and MSA.COM, in the FOG Library. My 780K disks from G2 Systems were also a great help since the ASM file generated by MSA from dBASE.COM was 452K. I used the find function in WS to chase down all the jumps and calls in dBASE.COM to come up with the locations needed to go directly to the dot prompt, or as indicated here, a greeting or you could enter a comedy put down.

The hard work has been done. All you need to do is obtain EDFILE.COM from FOG/UTL.042 and make the changes indicated between the brackets in the lines below. The EDFILE.DOC is very complete and much better than the documentation you will get with most purchased programs. Make a printout of the .DOC file as you might need it for reference as the EDFILE "HELP" messages cannot be pulled up while in the EDIT mode. An E will put you in the EDIT mode and the ^E (Control E) will toggle between the left hand HEX portion of the display and the right hand ASCII sections. A $\hookrightarrow$ advances to the next 128 byte sector while the minus - sign backs up one sector. A ^W saves the sector after you have made the changes. Most of the changes that will be made will be in HEX which are in 8080 mnemonics, but some of the HEX numbers that are entered are control codes specific to the Osborne and are listed below.

1A = clear the screen and home the cursor
09 = tab or moves the text over 8 spaces
1B 6C = underline/reverse video on
1B 6D = underline/reverse video off
0D = carriage return
0A = line feed

(Reverse video requires a change to the main board and the 80 column board on the Osborne 1.)

The first change for those who have made the change for reverse video and the block cursor or for those who want an underline instead of half intensity might be to install this in dBASE. This is easily done in the first screen that comes up when you call up **EDFILE DBASE.COM**. The change is made at locations 120H and 126H as indicated by the brackets below.

```
File: DBASE.COM Record: 00000 (0000H) LOF: 00152 (0098H)
00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
-- -- -- -- --
0110 - 02 20 04 1B 3D 00 00 00 00 00 00 00 00 02 1B
0120 - [6C]00 00 00 02 1B[6D]00 00 00 02 1B 28 00 00 00
```

Now everything that was previously in half intensity in dBASE will now be underlined or in reverse video. This will prevent you using the print screen feature of the PATCHOZ system modification or the OZROM if installed. Any printout of the underlined section or reverse video will give a line of "****", at least it does on my printer. This may be overcome in the printout of a screen from a command file by entering "SET INTENSITY OFF" in the command file.

The changes to be made to bring up dBASE without the sign-on messages will be made within 6 different 128 byte sections that are pulled up by EDFILE. If the entire sector were shown for this article it would involve about one and one-half pages of text so I have deleted those lines that are not changed. The first change is to be made at address 457A. If you made the changes noted above for the underline or reverse video and have saved the sector or did not make the changes your cursor should be at the "?" mark prompt. Hit A for ADDRESS then type **457AH** and the sector starting at address 4500H will appear, hit E to go into the EDIT mode and use the arrow keys to move to position 457A and start the entry in the brackets below.

```
File: DBASE.COM Record: 00136 (0088H) LOF: 00152 (0098H)
00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
-- -- -- -- --
4570 - 9E 27 3E 01 21 00 47 C3 72 3C[32 7E 45 C9 00 0E]
```

The six sets of hex numbers between the brackets are entered and then a ^W to save the sector and changes. A $\hookrightarrow$ then brings up the next sector.

```
File: DBASE.COM Record: 00137 (0089H) LOF: 00152 (0098H)
00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
-- -- -- -- --
4580 - [0F CD 05 00 FE FF C2 4C 3C C9]00 00 00 00 00 00
```

The changes between the brackets are made and a ^W to save, then at the "?" prompt type A for address and give **4927H** for the next change.

```
File: DBASE.COM Record: 00144 (0090H) LOF: 00152 (0098H)
00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
-- -- -- -- --
4920 - 00 45 32 01 45 3E 76[C3 43 49]3A 60 01 B7 CA 3A
```

Only three entries on this screen then a ^W to save and the A to go to address **4A0BH**.

```
File: DBASE.COM Record: 00146 (0092H) LOF: 00152 (0098H)
  00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
  -----
4A00 - B8 36 CD B8 36 21 0B 4A C3 4B 4A[00]DE E0 F2 E4
4A30 - 1A 14 54 54 54 40 40[9C 8A AE 84 82 A6 8A 40 40]
4A50 - 1F CD 45 3B 23 C3 4B 4A[21 77 4B]CD C8 36 3A 0D
```

You will make changes at a total of 13 locations on this screen then a ^W to save and the A to go to location 4B77H.

```
File: DBASE.COM Record: 00148 (0094H) LOF: 00152 (0098H)
  00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
  -----
4B70 - 72 79 20 31 39 38 34[1A 0D 0A 09 09 09 09 1B 6C]
```

```
File: DBASE.COM Record: 00149 (0095H) LOF: 00152 (0098H)
  00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
  -----
4B80 - [20 48 45 4C 4C 4F 20 54 48 45 52 45 20 1B 6D 0D
4B90 - 0A 0A 00]00 00 00 00 00 00 00 00 00 00 00 00 00
```

0123456789ABCDEF

```
> HELLO THERE .m.(
>.....(
```

At this point you have a choice of entering a message such as the "HELLO THERE" that is shown or some other message of your choosing. You have a total of 137 bytes to play with for a message of your choice. The message must end with a carriage return (0D), a line feed (0A), and a NOP (00).

The 1A at location 4B77 is to clear the screen then the CR/LF at positions 4B78 and 4B79. If you do not want a message to appear leave the "00" at position 4B7A and do a ^W to save the changes.

I have entered "HELLO THERE" to be almost centered on the screen in reverse video. The four "09"'s tabbed the start of the reverse video or underline over to start at col. 32 then the 1B 6C for the start of the reverse video. This is entered on the fifth screen then do the ^W to save and a ^ (carriage return) to bring up the next screen and an "E" to enter the edit mode. The cursor will appear at the first position (4B80) and a ^E will toggle you over to the ASCII side. Type in the "HELLO THERE" or your special message. I have a space after the last "E" then do a ^E to take you back to the HEX entry side. The 1B 6D turns off the reverse video and then the required <CR> <LF> <LF> and NOP or "00" to end the message and place the dBASE dot prompt below the message to be seen. The ^W saves your entry then a "Q" takes you back to the CP/M A> prompt. You are now ready to type DBASE and observe your hacking skills.

There is one anomaly which may appear the first time you bring up dBASE and on rare other occasions for which I do not have an explanation but do have a cure if it persists. The date error message "Thirty days hath, etc." will appear and roll up the screen before the appearance of the dot prompt or your message and then the dot prompt. This normally wpear and roll up the screen before the appearance of the dot prompt or your message and then the dot prompt. This normally will happen only the first time you bring up dBASE after the

changes are made. If it continues, go back into DBASE.COM with EDFILE and go to location 4A75 and starting at this location which is the "T" of "Thirty" (54) enter 0D 0A 00 then do the ^W to save then a Q to exit the program.

This change will work only on version 2.41. Versions 2.4 and 2.3B require the changes to be made at completely different locations. I am working on version 2.4 for someone and will report those changes when I find them all and may then start on version 2.3B if I feel ambitious and don't have more important things to do.

Jerry is a member of LOGIC (Local Osborne Group Including CP/M, an Affiliated Member Organization. Check the CAL-NDAR section of this issue for information on their meetings.

More Fan Mail

by Herb Golden, copyright © 1985

I have been running my Osborne 1 trouble free for the past two years. But without a fan. Naturally, the heat build-up is fairly intense. I became concerned for the first time recently after a particularly long session of formatting and copying disks. All went well, but the disks coming out of the drives were HOT.

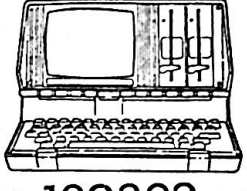
Having just found and joined FOG, I acquired back issues of *FOGHORN* and began a reading feast. Wonderful. Ideas and suggestions for improving the Osborne came fast and furious. I was pleased to find a running line of letters and commentary dealing with installing cooling-fans. I also noticed that ads for cooling-fans customized for the Osborne being run in the *Portable Companion*. Even though users praised the products, the cost seemed a bit high. Like some other FOG writers, I figured there must be a less expensive way.

If you can do without the fancy plastic housing, I suggest Osborne owners with heat build-up problems look at The Boxer Fan by IMC Magnetics Corp (Kit #2107F-14). The dimensions are four inches square and two inches high. The cost retail here in the Washington, D.C. area is \$25.00. Less than many and more than some. Mine is now up and running and my Osborne is running twenty-five degrees cooler.

Installation took about ten minutes and required only a screwdriver. The fan comes with mounting brackets and hardware and sits on rubber grommets for vibration-free cooling. It can be mounted either flat or vertical and at a variety of heights. It is QUIET but it moves a lot of air.

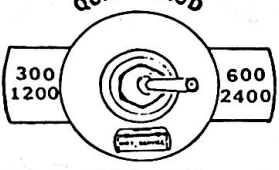
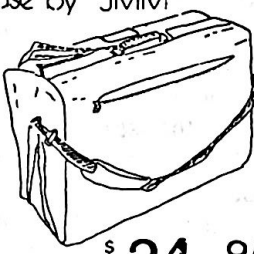
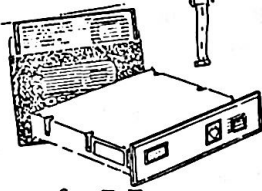
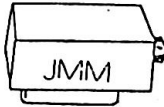
For permanent installation, the fan may be bolted directly to the Osborne's case (you supply your own hardware for this). Or for continued "luggability," simply place the fan atop the Osborne's factory air-vent (mine has one.) It works well either way. I chose to just sit the fan flat over the open vent to maintain luggability. It hunkered down and went right to work. No problems. No screen distortion and the fan is heavy enough to stay in place without slipping. If needed, IMC includes a double-sided sticky pad for additional securing and damping.

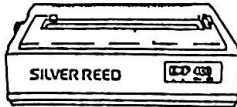
Now I just pack the fan right in the Osborne carry-bag and off we go. Cool all the way around.

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Reverse Video and Block Cursor

by Jerry Boyce

The information from Thom Hogan's article in the July/84 issue of the *Portable Companion* was used to modify the main board of my O-1 for the block cursor and reverse video. Then I found that this was only for the 52 column screen and did not apply to the 80 col. upgrade. My plea for help was published in the Dec. 1984 issue of the *FOGHORN* and I received an almost immediate answer from Tom Buckner of Washington State with the solution to the problem. Later a call was received from Gerry Werth of Madison, WI and a letter from James Lovell of Charleston, WV. with the info. I want to thank these gentlemen for their help. I will not go into the details of the conversion now as they all stated that they were planning to send the info. as an article to the *FOGHORN* or the *Portable Companion*.

The conversion has now been made to my 80 column board and I like the changes very much as I can now find my cursor easily in a screen full of text especially since I have added the OZROM and it is blinking at all times. The reverse video is great for both dBASE II and BASIC programs as for WordStar. The reverse video is turned on and off by the use of the underline codes (1B 6C) in HEX (27 108) in DEC for underline on and (1B 6D) HEX or (27 108) DEC for underline off.

In BASIC, the codes would be used in a program line at the place of use. This may also be done in dBASE II as well as a modification to the DBASE.COM file to have the normally dim lines appear in reverse video. The WS.COM file is modified to have all lines of dim text such as the help screens and marked blocks appear in reverse video.

For WS.COM file of WordStar version 2.26 change location 286 HEX to 6CH and location 28C Hex to 6DH. For WS version 3.3 make these changes at locations 269H and 270H in the same order.

For the 2.3B, 2.4, and 2.41 versions of dBASE II, the changes are made at the same locations for all three and you have two choices. If you want the variable space between the colons for the GET statement to be in reverse video, change location 120H to 6C HEX and location 126H to 6D HEX in the DBASE.COM file and not the overlay files. Now if you prefer the reverse of having the question or prompt in reverse video place the 6D at location 120H and the 6C at location 126H.

The above changes are easily and quickly made using the EDFILE.COM program from the Library.

This modification will give you the block cursor in SuperCalc with no change in the SC program. The normal underline at the active cell is now a solid reverse video block and is easily located. It will not be blinking if you have the OZROM or the PATCHOZ installed.

One warning on the reverse video, do not try to run the Print Screen function available from the OZROM or the PATCHOZ program as the part in the reverse video section will not print out at least with the Prism 80 printer. All you will get from the reverse area is the ""*"".

Now there is one other mystery that some could help me solve. The blinking CP/M cursor obtained by the OZROM or the PATCHOZ program blinks in dBASE II version 2.3B but not in version 2.4 or 2.41. I have compared 2.3B and 2.41 position by position up to location 1000 HEX and, taking into account the offset for 2.41 vs 2.3B, I have been unable to find any difference to account for this. I chased the numerous "jumps" and "calls" in the 1000 locations throughout the file and can find nothing that would apply to the cursor or at least that I thought could apply to the cursor. If some one has the answer, please send it to the *FOGHORN* so all of us will know.

* * * * *

Installing WordStar 2.26

For the Epson RX-80, FX-80, and LX-80

by Phillip A. Greenberg

This article provides instructions for installing WordStar 2.26 for the Epson RX-80, FX-80, and LX-80 printers. They complement the excellent guidance presented in "WSPATCHS.TXT" by Charles F. Molling for installing WordStar on the MX-80, and should be used in conjunction with that document (found on the FOG library disk FOG/MIS.014). I've written this because the RX-80, FX-80, and LX-80 have more print style options than the MX-80, which complicates the installation procedure somewhat. Nonetheless, using WSPATCHS.TXT and this document, anyone should be able to get through the procedure without too many migraines. (If I can do it, you can — believe me. Computers are not my strong suit.) The FX-80 and LX-80 have some additional bells and whistles that the RX-80 does not, but by and large the codes are the same for the standard print functions included here.

By the way, if you want a list of patches that is substantially more comprehensive than those presented in "WSPATCHS.TXT," write to Molling directly. He's written a gem of a piece entitled "WordStar Patches" that incorporates many more patches than appear in "WSPATCHS.TXT." His address is: Charles Molling, 1050 Cedar, Broomfield CO 80020. Be SURE to include a self-addressed 9 x 12 business size manila envelope STAMPED with 73 cents postage.

The changes described here show how one can install WordStar so that, using embedded print commands, one can utilize all five of the print styles available on the RX/FX/LX-80: double-width, condensed, elite, italics, and emphasized print. (Naturally, numerous combinations of these are also available.) My computer is double density, but I think most if not all of these patches work with single density as well.

The WordStar Install Procedure

For detailed instructions on how to run the install program, see "WSPATCHS.TXT". It provides an excellent explanation of just what the procedure involves as well as thoroughly understandable step-by-step guidance for the novice. If you have the blue-and-white perfect-bound "Osborne 1 User's

Reference Guide," see also the reprint of Thom Hogan's article on the subject, which in the Guide is called simply *Modifying WordStar* (Appendix 1, pp. 368-381). Read one or both of these before you try to fully comprehend the material below, because I'm assuming that you — like I did — have already read them. If you haven't and you don't know much about computers, you'll probably find the material below confusing. If you have, you'll probably breeze through what might otherwise be an arduous and unrewarding several hours. (The only thing those pieces don't explain clearly is initialization and ending sequences. See the note below for clarification.)

It will also be helpful if you understand the relationship between hex, decimal, and the ASCII symbols. This sounds complicated but it isn't really — Hex is simply a different numbering system than the decimal system we normally use. Besides, you can squeak by without this knowledge by following the instructions carefully. All you really have to remember is that you'll be entering most of the changes in hex, and Molling and I supply the hex for you. But if you can manage it, get your hands on a hex/decimal/ASCII chart. You'll find at least one in your Epson manual. For example, the table "Index by Character Code" in my RX-80 manual provides a complete list of decimal, hex, symbol, and function for all of the print control commands available for that printer.

Also, be forewarned that I've made several arbitrary decisions regarding which commands to use to implement which print styles. Probably the only convention is to use ^PA and ^PN to turn condensed print on and off (although some might argue that they should be reserved for elite on and off). On the four other sets of commands, I've simply allocated them according to my own preference. If you'd prefer to allocate them differently, i.e., if you want to use different commands than I've used to call up the different styles, you'll have to switch the values you use for the locations listed below. Just switch them according to your own preference, but beware of getting confused.

Superscripts and Subscripts

Note that I do not use the superscript and subscript functions — ^PT and ^PV — for super and subscripts. Rather, I utilize these commands to signal the fifth possible print style. If you want to be able to use super/subscripts, I think you'll have to make a choice about which of the five print styles, mentioned above, that you're willing to sacrifice, since there are only four pairs of other commands to use for alternative print styles. In fact, I use ^PT to toggle the emphasized on my Comriter II. By the way, if you use the Footnote program you must leave user patches 3 & 4 available for its use. I imagine that this is true for several other programs as well, but Footnote is the only one of which I'm aware.

Another factor to consider is that giving WordStar the ability to utilize super/subscripts necessarily means instructing the printer to always use half line feeds instead of whole ones (since the super/subscript functions operate by utilizing half line feeds). This means that the printer will run about 25 percent slower. So consider whether or not you'll be using super/subs often enough to justify the loss in print speed. Or,

alternatively, configure two WordStar COM files — one with super/sub capability and one without. Call up the one you need at any given time.

The Patches

All that said, when you get to the first "location to be changed," here are the changes. I've included a few others (e.g., insert, help level, etc.) for which most people frequently want to customize the default values. A fuller list is provided in WSPATCHS.TXT. Remember — this applies only to WordStar 2.26.

ITEM	LOCATION	LABEL	VALUES	CONTROL CHARACTERS
sign-on delay	02D2	DEL4:	0A=shorter display	
help level	0360	ITHELP:	00, 01, 02, or 03	
help message	0361		00=message if less than level 3 used	
Insert	0362	INITOG:	FF=On, 00=Off	
Move Insert Flag into screen view (52-column owners only)	0249	?WIO:?	4F (Originally 50)	
		(I'm not sure about the label - location is right)		
right margin	0380	INITRM:	40 for 65 spaces, 34 for 52 spaces, 33 for 51 spaces	
justification	0386	INITWF: +1FF=On,	00=Off	
hyphen-help	0389	INITWF: +4FF=On,	00=Off	
condensed print on	06B5	PALT:	01 ^PA	
	06B6	+1	0F	
standard print on (turn condensed off)	06BA	PSTD:	01 ^PN	
	06BB	+1	12	
elite print on	06C9	USR1:	02 ^PQ	
	06CA	+1	1B	
	06CB	+2	4D	
elite print off	06CE	USR2:	02 ^PW	
	06CF	+1	1B	
	06D0	+2	50	
double width on	06D3	USR3:	01 ^PE	
	06D4	+1	0E	
double width off	06D8	USR4:	01 ^PR	
	06D9	+1	14	
set italics on	06DD	RIBBON:	02 ^PY	
	06DE	+11B		
	06DF	+234		
italics off	06E2	RIBOFF:	02 ^PY	
	06E3	+11B		
	06E4	+235		
emphasized on	06BF	ROLUP:	02 ^PT	
		+1	1B	
		+2	45	

emphasized off 06C4 ROLDOW: 02 ^PT
+11B
+246

NLQ (Near Letter Quality) see above

On 03 Have to use
1B one of the
78 characters
1 above.

Off 03 Ditto
1B
80

[NOTE: These are for the LX-80 and
other Epson printers with NLQ cards
ONLY. I've never tried these patches --
hex codes supplied from Epson LX-80 manual.]

initialization sequence 06E7 PSINIT: 0B
06E8 +1 0D
06E9 +2 12
06EA +3 14
06EB +4 1B
06EC +5 32
06ED +6 1B
06EE +7 35
06EF +8 1B
06F0 +9 46
06F1 +A 1B
06F2 +B 50

ending sequence 06F8 PSINIT: +11 0C
06F9 +12 12
06FA +13 14
06FB +14 1B
06FC +15 32
06FD +16 1B
06FE +17 35
06FF +18 1B
0700 +19 46
0701 +1A 1B
0702 +1B 50

Notes on the Initialization and Ending Sequences

These sequences send commands to the printer that cancel any special print commands issued in a previous print session. For example, if you stopped the printer in the middle of printing something with doublestrike italics, that's what the printer will continue to print unless issued a new command.

In order to better understand what these sequences are, here's a brief explanation of the codes (which you will see generally correlate with those used to cancel special print modes, listed above). Remember that these codes are specific for the command assignments used here. If you're using the super/subscripts for super/subscripts instead of for emphasized, then either the codes or what they do will change according to how you've set up your printer.

Initialization Sequence.

0B hex number which says that 11 items follow
0D line feed

12 cancels condensed
14 cancels double-width
1B restores 1/6" line spacing (in case you changed it)
32
1B cancels italics
35
1B cancels doublestrike
46
1B cancels elite (I omit this on my copy since this
50 sequence toggles unwanted
behavior by my ComRiter.)

Ending Sequence.

0C hex number saying 12 items follow
12 cancels condensed
14 cancels double-width
1B restores 1/6" line spacing (in case you changed it)
32
1B cancels italics
35
1B cancels doublestrike
46
1B cancels elite (Same as above.)
50

Fast Scrolling Modifications

Installing a fast scrolling modification requires using Mike Schwab's modification program WordStar WSP2EPSN.HEX from FOG/APP.018. The description of the modification and the instructions regarding its use are supplied in the accompanying documentation file WSPATCH2 on the same disk. This modification results in a WordStar that works so fast you won't believe it — especially when combined with other patches that speed up operation as well (see the labels DELCUS:, DELMIS:, DEL1: through DEL4:, and some of the sign-on delays in Molling's pieces). I like this setup so well that I always use WordStar 2.26, even if more recent versions are available.

You MUST install the fast scroll modification before installing WordStar as described above, because some of the fast scroll modifications wipe out the above changes. First do the fast scroll modifications, check them to see that WordStar is functioning properly, and then do the above installation.

One problem that occurs at random with the fast scroll modification and with the above installation is that occasionally a phantom carriage return or line feed is installed in the process, and documents print double spaced instead of single, or quadruple instead of double. I fixed this problem as follows. At PSCTRLF: (which is location 0696) the sequence will probably be:

03 0D 0A 0A

Removing one 0A will remove one line feed, correcting the

problem. At least, that's what worked for me. The sequence will then be:

02 0D 0A

Molling also suggested going to PSHALF: (location 06A8) which has the following sequence:

02 0D 0A

and removing the 0A so that the sequence would be:

01 0D

However, when I tried this, I got no line feeds at all — The printer printed everything on the same line (no fun).

Be creative if gremlins strike — at least we've provided a few clues on where to look and how to proceed.

LATE NOTE: I recently discovered WSPATCH3 by G. Dahl on FOG/APP.037. This program modifies Schwab's WSPATCH2 for a C. Itoh F-10 printer, incorporates spooling (!), and has a simpler way to convert the patch for 80 column screens (so no horizontal scrolling occurs). By studying the ASM file, I figured out how to change the patches so that they work for Epson printers. You might want to see if you can do the same. Read the other materials before you try it. I succeeded after pondering what was going on for about a half-hour — and realize that I know as much about assembly language programming as I do about 9th century Serbo-Croatian dietary preferences. You'll need the information in WSPATCH2 to understand how to turn the ASM file into a HEX file (it's a simple procedure). I should add that I ended up with a few minor bugs that I haven't the faintest idea how to fix (when using R to run programs from inside WordStar with a disk that has a very large number of directory entries, the screen fails to clear entirely afterwards; and the screen shudders — only sometimes ??? — when one enters text after column 44 — as though the screen "wants" to scroll but can't).

It certainly would be nice if someone would put all the fast scrolling, spooling, and Epson printer patches into a HEX overlay written for WordStar 3.3, including a short explanation of how to change the patches for different printers and what one may and may not change to avoid bugs elsewhere . .

A Final Word

One final word of caution. If you want to combine print styles, beware of which commands come in which order. Also be forewarned that some styles — e.g., double-width and elite — seem to require format commands every line at both ends if they're to print properly with more than one pass of the printhead. I had trouble with doublestrikes and bold printing in the wrong places on the second and third passes until I sorted this out. If you have trouble, just keep this in mind and experiment — the right formats should emerge quickly.

Hope all this has been helpful. Enjoy your new WordStar! Pity MicroPro couldn't have provided all these tips instead of us all having to figure it out by ourselves . . .

A Screen-Pac Utility

by Jim Dunn

After installing the Osborne Screen-Pac in my O-1 I was faced with the problem of changing the number of displayed columns without rebooting. The Screen-Pac User's manual gives the necessary information so I wrote a simple assembly language program to do the screen switching. Unfortunately it did not work all the time. Later I obtained three short COM programs (one for each possible screen configuration) that worked. I decided to combine the three programs into one. The result is the following listing written in 8080 code for the Osborne 1. After entering the program using the "N" mode of WordStar, use ASM.COM to assemble the program and LOAD.COM to build a .COM file from the .HEX file generated by ASM.COM.

The program first checks to see if a Screen-Pac is installed by reading the status of bit 2 of byte 2400 in bank 2 of memory. If the upgrade is installed the program checks to see if any information was added after the program call on the CP/M command line. Example "SWITCH2 52" for a 52 column display. If nothing follows the program name then the program will display a short menu asking for either 52, 80 or 104 columns. After entering one of the three choices the program executes the screen size change and returns to CP/M.

```

;*****
;
; * SWITCH2.ASM by Jim Dunn
; * MODIFIED 22 Dec. 84
; * TO WORK WITH ANY CP/M 2.2 INSTALLED ON OSBORNE 1's
; * MODIFIED 23 Dec. 84
; * TO CHECK IF SCREEN-PAC IS INSTALLED
; * MODIFIED 23 Dec. 84
; * TO USE APPENDED COLUMN SIZE ON CP/M COMMAND LINE
;
;*****
;
; ORG 0100H
BIOS EQU 00000H
BDOS EQU 00005H
FCB EQU 05CH
;
; LXI H, SCREEN ;MOVE ROUTINE TO RAM 4000
; LXI D, 04000H ;TO READ BANK 2 LOCATION 2400
; LXI B, SCREEND-SCREEN ;TO DETERMINE IF SCREEN PAC
; DB 0EDH, 0B0H ;HAS BEEN INSTALLED
;
; CALL 04000H ;READ 2400
; DB 0CBH, 057H ;TEST BIT 2, 0 = SCREEN-PAC
; ; OSBORNE
; JZ START1 ; 1 = STANDARD
; ; OSBORNE
;
; MVI C, 009H ;SORRY, CAN'T SWITCH SCREENS
; LXI D, NOPAC

```

```

CALL BDOS
RET                ;BACK TO CP/M

;
START1 LDA FCB+1    ;COMMAND LINE CHECK
CPI 20H           ;IS IT A SPACE
JZ START         ;IF ZERO ASK FOR DIRECTIONS

;
LXI H,FCB+1       ;MOVE FCB APPENDAGE TO BUFFER
LXI D,BUFFER+2
LXI B,3
DB 0EDH,0B0H
JMP CHOICE        ;DO THE WISH

;
START MVI C,009H    ;SEND GREETINGS TO CONSOLE
LXI D,MESSAGE
CALL BDOS

;
MVI A,003H        ;SETUP READ CONSOLE BUFFER,
STA BUFFER        ;LIMIT 3 KEYSTROKES
MVI C,00AH
LXI D,BUFFER
CALL BDOS         ;READ CONSOLE BUFFER CALL

;
CHOICE LDA BUFFER+2 ;GET FIRST ACTUAL TYPED
                  ;CHARACTER
CPI '1'           ;IS IT '1' FOR 104 COLUMNS?
JZ SET104
CPI '5'           ;IS IT '5' FOR 52 COLUMNS?
JZ SET52
CPI '8'           ;IS IT '8' FOR 80 COLUMNS?
JZ SET80
JMP START        ;BAD INPUT, TRY AGAIN

;
SET104 MVI A,1
JMP COMMON
SET52  MVI A,0
JMP COMMON
SET80  MVI A,3
COMMON LHLD BIOS+1 ;GET BIOS ADDRESS
LXI D,0A2H      ;OFFSET
DAD D           ;E1A5 IN UNMODIFIED OSBORNE 1
                ;BIOS
MOV M,A         ;PUT COLUMN CODE IN BIOS
LXI D,0340H     ;OFFSET FOR BIOS CALL
DAD D           ;E4E5 IN UNMODIFIED OSBORNE 1
                ;BIOS
SHLD HERE
DB 0CDH         ;CALL TO BIOS TO SWITCH
                ;SCREEN SIZE
HERE DB 0,0      ;ADDRESS LOADED BY LAST
                ;'SHLD'
MVI C,0         ;INSTRUCTION
CALL BDOS       ;DO SYSTEM RESET i.e. back to
                ;CP/M prompt
;

```

```

MESSAGE DB 'SWITCH NUMBER OF DISPLAYED COLUMNS',0DH,0AH
DB 'ENTER 52, 80, OR 104',0DH,0AH
DB 'COLUMNS = '$'

NOPAC DB 'SCREEN-PAC NOT INSTALLED',0DH,0AH
DB 'SWITCH.COM WILL NOT WORK WITH 52 COLUMN ONLY
OSBORNE'
DB 0DH,0AH,'$'

;
SCREEN DI                ;SWITCH TO BANK 2 AND PUT CON-
                        ;TENTS OF
OUT 00H
LXI H,02400H            ;2400 IN REGISTER A
MOV A,M
OUT 01H                 ;SWITCH BANK 1 AND RETURN
EI
RET
SCREEND NOP

;
BUFFER DS 5              ;READ CONSOLE BUFFER
END

```

[A very similar program was put in the library on FOG/UTL.033 called TO.COM, written by Chris Hill. New programmers should note the different ways of arriving at the same place! — Jack Brown]



Downloading Files With the Executive, AMCALL, and Dawn Technology Connection *by David Whorf*

System Requirements:

1. Osborne Executive
2. Dawn Technology Modem Interface
3. AMCALL Executive Update
4. Osborne COMM-PAC Modem <300 Baud>

The articles in *FOGHORN* are wonderful and very informative. Sometimes these articles lose track of the "how to" in deference to the "why". This article is not going explain the "why" of anything, just the "how". The "how" in this case is: How do you download a file, (get a file from the FOG modem public domain system). I will endeavor to keep the commands as simple as I can. I know for mine own part, this is what I

wanted when I first wanted to "LOG ON" with a FOG SYSTEM. Don't tell me why, just how! I can figure out the why, later. With this in mind, I will give a step by step explanation of what you should enter in order to receive a file. This explanation assumes that you have read the documentation that comes with AMCALL and that you vaguely understand how the system works.

Given that your system fulfills the above requirements, the procedure is:

1. Enter AMCALL by typing **AMCALL**
2. The default settings are:

CURRENT CONFIGURATION:

Duplex Mode:	Full
Signal Rate:	300 Baud (Only setting possible)
Protocol:	X-ON/X-OFF
Uart Mode:	7 data bits, Even Parity
Filename:	Default.Fil
Log Switch:	Off
Screen Switch:	Off

ENTER ONE OF THE FOLLOWING:

SP (SPACE) Configuration Modification
CR To use the present configuration
ESC to exit to CP/M

3. Hit the Space Bar to make modifications.
4. Type **P** to change the Protocol setting and enter **M** for Modem. This will also automatically change the UART Mode to "8 BITS, NO PARITY". That is the configuration needed for the FOG files.
5. By typing an **F** you can change the filename. After you have made connection with the system, you can change the filename by using the "<ESC> F" command. This will prompt you for a new filename. Enter the file name and hit the ↵ (RETURN), twice. The second return in this case will return you to the FOG system prompt.

REMEMBER: You should change this filename after you have down loaded each file. This is when having the entire FOG PUBLIC DOMAIN FILE LISTING comes in handy. In this way you know just what files you want thus saving time and money in "On Line" charges from the Phone Company.

6. At the completion of all modifications, type ↵ followed by an **0** (0 not zero) to get to the "ORIGINATE" mode of the dialing screen. Dial the phone number of the board you wish to enter: (for the FOG Big Board — 14157552030) If you are lucky you will get on right away. You must pick an off hour. I find that if you are willing to pay the phone charges you can dial during the middle of the working week. My experience has been that public domain files are worth the money and I'm fully willing to pay the charges to get what I want. If you want the best for the least, you must pick an off hour and stay with it. The redial function will be of great help here. Simply enter a double quote followed by a ↵ and the AMCALL system will redial the number. I must say I have found that this does not always work and

sometimes I'm returned to the "Dial Menu" of AMCALL. Similarly, when I use the Sprint System for long distance calls, the redial function does not always seem to work. Be attentive and watch as your system works.

NOTE: When your system tells you that you have made contact, type a ^C (control C).

7. When the SYSTEM asks you how many nulls? Answer with **0** (zero not O).
8. You will then be asked to enter your password or name.
NOTE: In order to use any FOG system, you must first call and file your name and FOG number. In a few days the system will be updated to recognize your entry and your choice of password.
9. If you are a first time user, read all the messages. Otherwise, a number of control "K"s (^K) will skip you to the command prompt. Enter **J** to go direct to the RCP/M public domain file system. This will be denoted by the message: "ENTERING THE SYSTEM" followed by the prompt "A0>".
10. Change the drive by simply entering the drive name (i.e. **B:**) Do not forget to enter the colon. To change USER AREAS, type **USER n**. The "n" designates the user area (0 through 15).
11. The FOG system uses a command function called **SECTION**. Type **SECTION ?** to get a listing of all the sections of the FOG Files system. Typing "SECTION EX1.FOG" will take you directly to the Executive Section of the FOG Files.
12. To see the files on all default drive areas type:
 - a. OS1 52 column screen **DIR52 *.* \$L**
 - b. OS2 (Executive) 80 column Screen, **DIR80 *.* \$L**The "\$L" will give you the files which are included in the libraries (filename.LBR).
13. To read the contents of any file:
 - a. Non library files — enter:
TYPE n:FILENAME.TYP
 - b. Library files — Enter:
TYPE LIBRARY NAME/FILENAME.TYP
Example: **TYPE EX1#055 N20.DQC ↵**
14. XMODEM and how to use it. Don't worry about having XMODEM on your system, the FOG system has it. There are two main ways to use the XMODEM program:
 - i. Downloading files:

- a. To receive a non-library file, type:

XMODEM S Filename.typ ↵

When the system tells you how much time is needed to transfer the file, type: **<ESC> R**

- b. To receive a library file, type:

XMODEM L Library/name filename.typ

Example: **XMODEM L LNG#002 C.DOC ↵**

This will download the file "C.DOC" from the Language library file LNG#002.

Enter an <ESC> R as above to receive the file.

II. Uploading files:

Type: XMODEM RC Filename.typ

When the system tells you it is ready to receive, enter an <ESC> T.

15. Use all normal CP/M System commands to move around the FOG System.
16. Type **BYE** when you have finished your session. A Time Limit of 1 (one) HOUR per day is imposed. Please comply with this requirement.
17. Typing **METAL** at any system prompt, will return you to the Bulletin Board Message area. A J will bring you back to the files.

Well, that's it. Happy hunting. Again may I repeat; you can save yourself a great deal of time and money if you send \$5.00 to the FOG Office and get a listing of the Library.

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Forth Literature at a Discount Now Available from the FORTH Interest Group

San Jose, CA, Mar. 15 — The best in Forth literature is now available at a 10% savings directly from the FORTH Interest Group (FIG). Edited and reviewed by Forth experts, the recommended publications include tutorials, conference proceedings, listings, advanced topics, and more. The discount is available to all FIG members.

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A Point of Interest

A group of MicroPro technical gurus have established an independent MicroPro Special Interest Group (SIG) on CompuServe to handle all varieties of questions and comments surrounding our product line. The MicroPro FORUM is operated by Mojo Jones and Ed Greenberg of Product Development, but it is not formally associated with our company. You may establish contact on Page PCS-29.

cont. on page 77

KAYPRO

Undocumented Video Features for the Kaypro 10

by Ron Mozer and Steven Sanders

The Kaypro 10 has several features available to the user which are not listed in any of the Kaypro manuals. These features include a 25th line and the ability to save and recall the cursor position. If you look at the owner's manual, you will find a section which describes character attribute commands. These commands allow inverse video, blinking, reduced intensity, etc. The following is documentation on some of these commands.

The table of commands can be updated to the following:

	To Turn ON:	To Turn OFF:
Inverse Video	ESC, 'B0'	ESC, 'C0'
Reduced Intensity	ESC, 'B1'	ESC, 'C1'
Blinking	ESC, 'B2'	ESC, 'C2'
Underlining	ESC, 'B3'	ESC, 'C3'
Cursor	ESC, 'B4'	ESC, 'C4'

Video mode	ESC, 'B5'	ESC, 'C5'

The Video Mode attribute when 'on' allows a character to be written over. When 'off' a previously printed character can NOT be written over.

	To Save:	To Recall:
Save Cursor Pos.	ESC, 'B6'	ESC, 'C6'

	To Turn ON:	To Turn OFF:
25th line	ESC, 'B7'	ESC, 'C7'

What follows is a sample MBASIC program which demonstrates these features:

```
10 REM This program will demonstrate the 25th line
20 REM and other features of the Kaypro 10.
50 REM
110 PRINT CHR$(27); 'B6' : REM Save cursor position
120 PRINT CHR$(27); 'B7' : REM Enable 25th line
130 PRINT CHR$(27); '-8 ' : REM move cursor to 25th line
140 PRINT 'THIS IS THE 25TH LINE' : REM Show user we can do it!
150 PRINT CHR$(27); 'C6' : REM Recall cursor position
160 REM When you are done with the 25th line it may
170 REM be disabled with the following
180 PRINT CHR$(27); 'C7' : REM Disable 25th line
200 END
```

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Compu/CHART®, a market level stock charting program which employs ASCII characters to draw trend charts on a display screen, announces version 1.2. This upgrade offers new features of importance to investors who watch market trends.

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• • • • •

FOG MEMBER ANNOUNCEMENTS

A Newsletter Devoted to the CBASIC Programmer and User

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Topics covered include such areas as user functions and useful subroutines (with source code), bug reports (or undocumented compiler characteristics), hints and techniques to help your programming efforts, comments and observations on the way the compiler(s) react to the different operating system environments they run under, how to build and maintain function libraries, common questions on 'how to' with CBASIC, what are and how to use productivity tools (as well as reviews of), and just about anything any CBASIC programmer or user might want or need to know.

The subscription rate is \$18/year in the US & Canada, \$28 all other countries (US dollars). The newsletter is currently sent first class in a kraft envelop to insure as few as possible are eaten by the US Postal Service. Payment should be by check or money order made out to, Babe1/CBNews c/o Ric Allan, and sent to:

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SuperCalc 2 & dBASE 2.3

I have been an OZ owner for over two years now, it has gotten me through some rough assignments at school and has been a tremendous help to a local non-profit organization. Now however I am moving on to a Compaq and wonder if someone would like to buy my SuperCalc 2 or dBASE 2.3. I am asking \$75 for SC2 and \$125 for dBASE. The daytime number to call is (408) 373-3566 and evening is (408) 394-6958. Ask for Jim Clark.
• • • • •

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Please refer to *FOG MEMBER MERCHANDISE* in this issue for information on obtaining back issue copies of the *FOGHORN*. We maintain an inventory of back issues because the information contained in them can save you hours of aggravation!

FOG MEMBER MERCHANDISE

Decision on whether or not to discontinue the FOG t-shirts will depend on members' interest. These T-shirts are soft blue in color with the FOG logo in black and are Hanes 100% cotton. They are cut large to allow for shrinkage. Sizes currently available are small (34-36) and medium (38-40). We are out of stock on the large and X-large sizes. The price is \$7.50 each for members and \$10.00 each for non-members. In either case, shipping is included.

The FOG Disk Library Directory (\$5.00 including shipping) lists the disks which have been released by the librarians. The directory has a description of the files on each disk. Updates of the directory will be announced in the *FOG MEMBER LIBRARY NEWS* section.

As long as possible, we will continue the practice of distributing update sheets to those members who send in a stamped 9" by 12" manila envelope with the correct postage affixed. We will not attempt, however, to maintain records on who has received update pages. When updates are announced, only the current set of update pages will be sent. **Do not send envelopes in until a release has been announced.**

In September of each year we release a compilation of all issues of a previous volume. "Best of Volume 1" (\$5.00 including shipping) was released in 1984. This 54 page issue carries all the articles of volume one and has no advertising. "Best of Volume 2" will be released in September, 1985. Price will be announced at that time.

The FOG Starter Disk is available in two formats. The Osborne 1 double density version is on a single disk (\$4.00 including shipping), the Osborne 1 single density version is on two disks (\$4.00 per disk including shipping). Note that this is a drop in the cost of the disk. This decrease is a result of the savings realized on the volume of orders received thus far. The programs on these disks will change as better versions become available but will always be the programs needed to use other programs from the FOG Disk Library and FOG RCP/M systems.

There is currently about 260 disks in the library. If you cannot obtain a copy through your local group or RCP/M, you may order directly from the FOG office. Your order **must** specify which disk you want. We cannot fill special requests for specific pro-

grams. The price of the disks is \$4.00 per disk for less than ten disks and \$3.00 for ten or more. The price includes shipping. Including a note as to which computer you own will speed shipping of your order.

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INDEX cont. from page 1

- 47 **More Epson PX-8 to Osborne 1** by Charles Martin
Charles tells us how he transferred WordStar files from the Epson PX-8 to the Osborne 1.
- 47 **Recovering Lost Files — Perfect Writer**
by Richard Dedic
Notes on using DU-V86.COM to recover a file which has been formatted using Perfect Writer and the original file from which this file was formatted has been lost.
- 49 **DATTIM.COM Patch** by Scott Glickfield
How to patch DATTIM.COM to eliminate input of the time.
- 49 **Turbo Pascal On CO-POWER 88** by Jim Dunn
CO-POWER 88 executes benchmark test much faster than IBM PC if you are not writing to a disk.
- 50 **Terminal Control Data for Various Terminals**
by Author Unknown
For those who need to know the terminal codes, here is a list of the more common terminals.
- 51 **A Toolkit of Utilities** . . . by Carl Greene, copyright © 1985
Booting up your software with less keystrokes. Carl takes the hint from WS.COM and renames his most used programs to save keystrokes.
- 52 **Comments and Patches for MicroPro's WordStar/MailMerge Upgrade 3.3 for the Osborne 1** by Warren A. Welsh
He bought the upgrade and then found the solutions for adding his favorite patches.
- 53 **Date Only Patch for DATTIM.COM** . . . by Claude Ostyn
A simple patch to DATTIM.COM to request and show only the date.
- FOG MEMBER LIBRARY NEWS**
- 56 **CSTRIP.BAS** by Sam Tove
This article tells us what CSTRIP can do and how to run this program.
- 59 **The FOG Disk Library — An Overview**
by Dick Ezzard
A historical background of the FOG Library, using the library the easiest way, other ways to use the library, and finding aids that make access of files easier.
- 63 **Televideo Library Notes** by Pete Masterson
- 63 **Miscellaneous Library Notes** by Troy Soult
- OSBORNE 1**
- 66 **SWP CO-POWER 88** by Jim Dunn
Some words on the usage of SWP CO-POWER 80 and a table of various time configurations of WordStar comparing ramdisk speed to floppy disks.
- 67 **Fast Up dBASE II Ver. 2.41 for the Osborne 1**
by Jerry Boyce
How to speed up dBASE II by eliminating the viewing of the date and go directly to the dot prompt.
- 68 **More Fan Mail** by Herb Golden, copyright © 1985
An article about cooling the Osborne without spending too much money.
- 70 **Reverse Video and Block Cursor** by Jerry Boyce
A member reports on his modification for reverse video.
- 70 **Installing WordStar 2.26 For the Epson RX-80, FX-80, and LX-80** by Phillip A. Greenberg
Instructions for installing WordStar 2.26 for the Epson RX-80, FX-80, and LX-80 printers.
- 73 **A Screen-Pac Utility** by Jim Dunn
Similar to a program in the FOG Disk Library, this program allows the user to easily change the screen size with the 80+ ScreenPac.

EXECUTIVE

- 74 **Downloading Files With the Executive, AMCALL, and Dawn Technology Connection** . . . by David Whorf
An article that explains how to get a file from the FOG modem public domain system.

KAYPRO

- 76 **Undocumented Video Features for the Kaypro 10**
by Ron Mozer and Steven Sanders
This article is about several features not listed in any of the Kaypro manuals, documentation on some of the commands, and a sample program that demonstrates these features.

REGULAR FEATURES

- 2 **FOG Membership Information Updates**
- 7 **LETTERS**
- 39 **CALENDAR**
- 42 **FOG FONES**
- 79 **ADVERTISER INDEX**
- 77 **FOR SALE**
- 29 **CORRECTION**
- 76 **PRODUCT ANNOUNCEMENTS**
- 77 **FOG MEMBER ANNOUNCEMENTS**
- 78 **FOG MEMBER MERCHANDISE**

ON VACATION

- HELP**
- DBASE II**
- APPLICATIONS TOOLBOX**
- MORROW**
- ZORBA**
- PMC MICROMATE**
- LOBOMAX**

Advertiser Index

Coast Instrument Company	17
Colorado Softworks	55
Dave Blair	15
Flashlight Software	55
Future Systems	37
Gard Micro Systems, Inc./JMM Computer Products	44
G2 Systems Design	43
J. Gaudio Company	11
Microtech Computer Services	35
Mission Peak Systems	20
Nuevo Electronics Corp.	57
PeopleTalk Associates Inc.	21
Portable Companion	6
Reeltech Computer Services	63
Smirnov Associates	25
Spectre	64, 65
Spite Software	30
User's Guide	48
USL Data Systems	10
WestWind Computer	26, 27
Witt Services	69

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